Combined Management Report

General Group Information

Group Structure

Legal and organizational structure

As the corporate center and strategic holding company of the Group, JENOPTIK AG, based in Jena, has top-level functions including strategic corporate development, key tasks in controlling, corporate development (strategy, mergers and acquisitions, innovation), corporate real estate management, finance, internal audit, investor relations and communications, human resources, accounting, legal and IP, compliance and risk management, taxes, and treasury. It further pools the central functions of IT and data security, purchasing, safety, occupational health and safety, and environmental protection.

The Group's operating business is the responsibility of the divisions and largely focused on the photonic growth market.

As part of its 2022 reorganization, the Jenoptik Group has consolidated its core photonics business in two new divisions, Advanced Photonic Solutions (industrial customer business, B2B) and Smart Mobility Solutions (business with public sector contractors, B2G). In the first quarter of 2022, the former Light & Optics and parts of the former Light & Production divisions were merged into the new Advanced Photonic Solutions division. Non-photonic activities, particularly for the automotive market, are operated as independent brands (incl. HOMMEL ETAMIC, Prodomax and INTEROB) within the Jenoptik Group's Non-Photonic Portfolio Companies. The former Light & Safety division became the Smart Mobility Solutions division.

Since the first quarter of 2022, the two photonics divisions and the Non-Photonic Portfolio Companies represent the segments as defined in IFRS 8.

Jenoptik successfully completed the sale of VINCORION on June 30, 2022. Approval was granted by the competent authorities and the necessary conditions of closing were met. The acquirer of VINCORION is a fund managed by the private equity firm STAR Capital Partnership LLP ("STAR"). VINCORION develops, produces, and sells mechatronic products, in particular for the security and defense technology, aviation, and the rail and transport industries. VINCORION's activities are shown as discontinued operation in the IFRS financial statements.

As of August 31, 2022, JENOPTIK Medical GmbH (formerly BG Medical Applications GmbH) was merged into JENOPTIK Optical Systems GmbH with retrospective effect from January 1, 2022.

In recent years, Jenoptik has continued to expand its international business and the structures associated with it. The US holding company at the Jupiter location in Florida is responsible for steering the overall strategy and coordinating financial activities for the American market. The Asia / Pacific region is managed from Shanghai, China. The operating business in Europe is coordinated at the main locations in Germany and Great Britain.

G05 Organizational structure of the Jenoptik Group in the fiscal year 2022

Integrated businesses

Advanced Photonic Solutions
(B2B business)

Semiconductor & Electronics, including Laser Material Processing

Life Science & Medical Technology

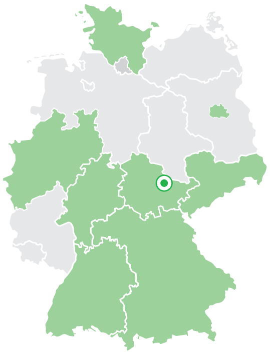
Smart Mobility Solutions
(B2G business)

Smart Mobility

Non-Photonic Portfolio Companies

Prodomax
INTEROB
HOMMEL ETAMIC

G06 Selected locations of the Jenoptik Group



Germany

Berlin
Dresden
Jena
Monheim am Rhein
Triptis
Villingen-Schwenningen
Wedel
Wetzlar

Europe

France
Bayeux
Villeurbanne

Great Britain
Camberley

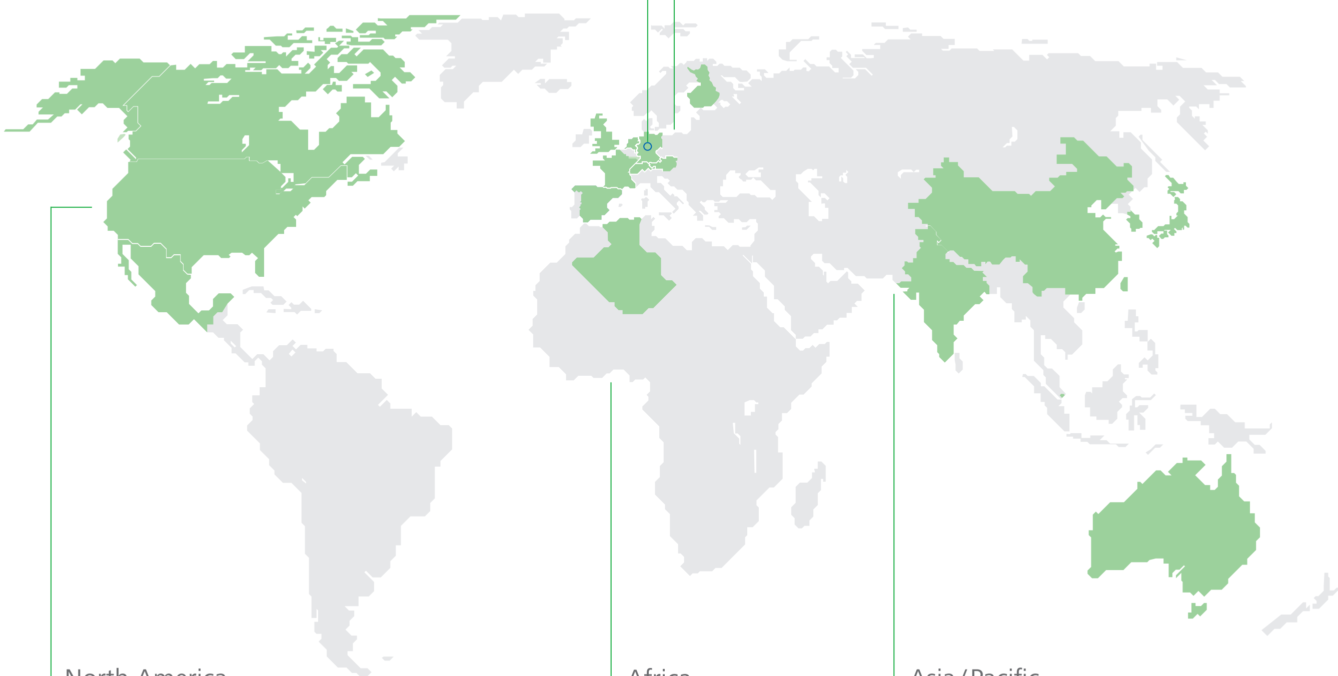
Netherlands
Drunen

Austria
Vienna

Switzerland
Heerbrugg
Uster

Finland
Tampere

Spain
Valladolid



North America

USA
Fremont (CA)
Huntsville (AL)
Jupiter (FL)
Rancho Cucamonga (CA)
Rochester Hills (MI)

Mexico
Saltillo

Canada
Barrie
Mississauga
Toronto

Africa

Algeria
Algiers

Asia / Pacific

Australia
Sydney

China
Shanghai
Wuhan
Peking

Hong Kong
Hong Kong

India
Bangalore

Taiwan
Taoyan

Japan
Yokohama
Shizuoka City

Singapore
Singapore

South Korea
Pyeongtaek
Suwon-si

Last updated: December 2022

Key locations

Jenoptik is represented in over 80 countries worldwide, with a direct presence in 20 of them, e.g., through its own companies, investments, or asociates. The majority of the Group's products are manufactured in Germany, followed by the US and China. The Group's Jena headquarters is primarily home to the Advanced Photonic Solutions division. Other major German sites are at Wedel near Hamburg (Advanced Photonic Solutions), Monheim near Düsseldorf (Smart Mobility Solutions), Villingen-Schwenningen (Non-Photonic Portfolio companies), Berlin, Dresden, and Triptis (Advanced Photonic Solutions).

Outside Germany, Jenoptik has sites or is represented by subsidiaries or associates in the following countries: Algeria, Australia, Austria, Canada, China, the Czech Republic, France, Great Britain, India, Japan, Korea, Mexico, the Netherlands, Switzerland, Singapore, Spain, Taiwan, and the US. G06

For shareholdings of the Jenoptik Group, Notes, chapter 11

Business Model and Markets

Jenoptik is a globally operating photonics group that provides the majority of its products and services to the photonics market. Photonics covers the basics and areas of application of optical methods and technologies that address the generation, transmission, shaping, and measurement of light. Controllable light sources such as LEDs and lasers, together with suitable optical devices and sensors, make it possible to transmit data, analyze materials, create micro-optical components, and perform non-contact precision measurements. Autonomous cars are practically inconceivable without LiDAR (light detection and ranging) technology. Photonics is also critical to efficient data exchange. In the process, it uses the special physical properties of light quanta (photons) in place of electrons or also combines optics and electronics. Light-based solutions also enable resource-saving production processes, material savings, and reduced energy consumption, thus contributing to the global reduction of greenhouse gas emissions.

As a supplier of innovative capital goods for these markets, Jenoptik is primarily a technology partner to industrial companies. Its range of products comprises OEM or standard components, modules and subsystems, through to complex systems and production lines for numerous sectors. The range also includes total solutions and full-service operator models. Alongside industry, customers in the Smart Mobility Solutions division include public sector contractors.

With its product portfolio Jenoptik competes with a wide range of internationally operating companies predominantly specializing in only one or a few of the product areas and markets addressed by Jenoptik. Differing service ranges are only comparable to a limited extent and thus make it difficult to provide definite market share estimates.

Research and development occupy a key position in Jenoptik's work, with the customer at the center of everything we do. Technology-intensive products and systems are often created in close collaboration with customers. Lasting and successful cooperations with key customers are therefore an important factor of Jenoptik's success. This demands a spirit of mutual trust together with knowledge of our partners' requirements, and is reflected, for example, in the costs for developments on behalf of customers in the fiscal year 2022.

Examples of innovative products can be found in the "Research and Development" chapter

The Jenoptik Divisions

Advanced Photonic Solutions

The Advanced Photonic Solutions division is a global supplier of solutions and systems based on photonic technologies. Jenoptik has a wide range of such technologies here, especially in the fields of optics, micro-optics, laser technology, digital imaging, optoelectronics, sensor technology, and optical test and measurement systems. The core markets in which Jenoptik supplies specific market segments are the semiconductor equipment, medical technology/life science, information and communication technology, metrology, automotive, virtual and augmented reality, industrial automation, and the security technology industries.

As a development and production partner, the division uses its expertise in key technologies to fulfill customers' demanding requirements. Its systems, modules, and components help customers meet their challenges with the help of photonic technologies. Key sales regions in the Advanced Photonic Solutions division are in Europe and North America, as well as in Asia/Pacific.

The division's competitive environment is in part heavily fragmented, with a limited number of larger suppliers. For some products, the division is the sole supplier. Competitors include MKS/Newport, Excelitas/Qioptiq, IDEX, II-VI/Coherent, Lumentum, Novanta, OptoAlignment Technologies, Optikos, Gooch & Housego, Trumpf, and Prima Industrie.

In the Semiconductor & Advanced Manufacturing area, Advanced Photonic Solutions develops and produces optical and micro-optical systems as well as precision components to the highest quality standards. This includes complete systems and modules, as well as special optical components and custom solutions for wavelengths from the far infrared (FIR) to the extreme ultraviolet (EUV) range. These products are particularly used in both lithography and inspections within the semiconductor equipment industry. The division works with leading international manufacturers, e.g., ASML, in this field. The semiconductor business of the SwissOptic Group, acquired in late 2021, further rounds off the division's product portfolio with a complementary range, enabling it to offer existing and new customers an even broader product spectrum.

With its innovative, in part software-assisted optical and micro-optical solutions, Jenoptik is also able to exploit further potential for growth in the field of digitization, for example in the market for information and communication technology, and increasingly also in the laser material processing market. For information and communication technology, the company in particular supplies components and modules for use in optoelectronic transceiver modules and in systems for free-space optical data transmission. The product range also features optoelectronic probe cards for industrial testing of photonic integrated circuits at wafer level. In the laser material processing market, customers including system integrators and manufacturers of laser production equipment are supplied with components and modules, e.g., F-Theta lenses, beam expander modules or gratings, and smart system solutions.

See Segment Report for detailed information on the course of business in the divisions and the Forecast Report for information on the development of the divisions

In the field of biophotonics, the division offers applications for bio-imaging and laser-based therapy. Based on its core expertise in laser and LED-based beam sources, optical components and modules, sensors, digital imaging, and system integration, Jenoptik develops solutions and products for the medical technology/life science industry. OEM laser solutions are based on diode and disk laser technologies and are used in ophthalmology, dermatology/aesthetics, and in surgery. The division also develops and produces optical and optoelectronic modules and subsystems for digital imaging and microscope cameras for applications in the medical field. Jenoptik acquired a complementary product portfolio in the areas of dentistry (e.g., intraoral scanners) and robot-assisted surgery (e.g., components for minimally invasive surgical devices) in 2021 through the acquisition of BG Medical. Through the products and services of the SwissOptic Group, the Group is strengthening its own business in the areas of ophthalmology and life science.

Information on our extensive product range can be found at www.jenoptik.com/products

Biophotonics customers include national and international medical technology companies, in particular OEMs in ophthalmology, dentistry, diagnostics suppliers, and companies involved in DNA sequencing.

In the field of Optical Test & Measurement, the division supplies an extensive range of optical measurement, testing, and production technology for development, quality assurance, and production worldwide through TRIOPTICS. Its expertise ranges from testing individual optical components to the assembly and testing of complex camera systems. These systems help to accelerate and improve the development, quality control, and production of lenses, objectives, and camera modules. Customers include smartphone and camera manufacturers, and their suppliers. We are also targeting other markets, such as those for new virtual and augmented reality applications in the industrial and consumer segments, the optical industry, and the automotive industry. Products and services are marketed worldwide through a network of subsidiaries and sales partners, with local service centers in key markets.

The Optical Test & Measurement unit also has optical testing systems for product inspection and process optimization, optical shaft metrology, and complex imaging systems for applications in the field of parts measurement, surface testing, and position detection. Customers come primarily from the automotive, stamping, and glass industries, as well as from the machine and equipment manufacturing sector.

For the field of industrial solutions, Advanced Photonic Solutions supplies high-power optoelectronic components and modules as well as integrated solutions that combine optics, laser technology, sensors, and digital imaging as required. In addition to complex components for head-up displays and lenses for driver assistance systems, the division also produces polymer optics for machine vision applications. Sensor products cover such things as infrared and thermographic camera systems, polymer and infrared optics, and laser rangefinders. The division focuses on applications in the fields of industrial automation, mobility, security/defense, and industrial applications.

The product portfolio in the Advanced Photonic Solutions division also includes laser machines (e.g., for laser airbag weakening) that are integrated into customers' production lines, e.g., in the automotive industry, as part of process optimization and automation upgrades. They are used to machine plastics and leather at high speed and with accurate contours, and are thus both efficient and precise.

Smart Mobility Solutions

The Smart Mobility Solutions division is primarily active in the areas of traffic law enforcement/road safety, civil security, road user charging, emission control, and traffic management. Jenoptik develops, produces, and sells photonics-based components, systems, and services for customers in the public sector (local and central government, police and regulatory authorities, and both public and private organizations), which are used to monitor compliance with applicable road traffic regulations and thus make roads and cities safer worldwide.

With its range of sensor-based traffic cameras and automatic license plate recognition (ANPR/ALPR), the division focuses on technologies for traffic monitoring. The solutions offered cover a wide range of stationary and mobile applications, which also make use of video analytics and artificial intelligence. Examples include vehicle monitoring and classification, speed and red light monitoring, illegal turning maneuvers, average speed determination, civil security, road user charging, and emission control.

Depending on the region and its local requirements, the division offers different business models, ranging from the provision of systems and enabling services to managed services and traffic service provision, a combination of equipment business and services. Here, Jenoptik covers the entire supporting process chain – from system development, construction, installation, and maintenance of the monitoring structure, to capturing images of traffic violations and their automated back-office processing. Smart Mobility Solutions is also increasingly offering its customers software-as-a-service (SaaS) business models, e.g., in the UK or Australia, in response to demands for greater flexibility and less upfront investment by customers.

The sales activities in the division are subdivided into five regional units: the Americas, Middle East/Africa, Great Britain, Europe, APAC/Australia. Its regional areas of focus are primarily determined by customers. Smart Mobility Solutions thus has a strong local presence in Germany, Great Britain, the Netherlands, Switzerland, Austria, North America, and Australia, and continues to expand its sales activities on the basis of the above structure.

In addition to international companies such as Verra Mobilty/Redflex, Sensys Gatso Group, Idemia, and Vitronic, Smart Mobility Solutions also competes with a large number of locally operating companies, e.g., in the Asian region.

Traffic safety systems in Germany are tested and certified by the Physikalisch-Technische Bundesanstalt (PTB) in Braunschweig, thereby obtaining proof of their measuring accuracy. Foreign installations are subject to controls by national institutes, although various countries also partially or fully recognize the German PTB test certificate or licenses from other leading European licensing authorities.

Non-Photonic Portfolio Companies

With many years of experience and expertise in industrial metrology and optical inspection, as well as highly flexible robot-based automation, the Non-Photonic Portfolio Companies develop manufacturing solutions for customers in the automotive, aerospace, and other manufacturing industries. With its products, automation solutions, and services for industrial customers, Jenoptik is thus primarily addressing the trend toward greater flexibility and efficiency in production processes, particularly in the automotive industry.

In Automation & Integration, the companies, Prodomax and INTEROB, plan and create automated production lines and integrate them into customers' manufacturing environments. Solutions, products, and services related to process engineering and implementation include plant layouts, simulation, machine control and software design, robot handling systems, and transport devices.

The HOMMEL ETAMIC metrology portfolio includes high-precision contact and non-contact production metrology with a resolution in the nanometer range for tactile, pneumatic, and optical inspection of roughness, contour, shape, and the determination of dimensions at every stage of the production process and in the inspection room. A wide range of services such as advice, training, service, and long-term maintenance agreements are also all provided.

The Non-Photonic Portfolio Companies are active in the centers of the global automotive and automotive supplier industry in Europe, North America, and Asia and, in addition to Germany, also have development and production facilities in the US, Canada, France, and Spain. There are also numerous sales and service offices located on three continents. Companies such as Marposs, Mahr, ViciVision, Tokyo Seimitsu, Faro Technologies, and Renishaw compete with Jenoptik's metrology business and companies such as Centerline Automation, Serra, and Kuka with its automation business.

Further information on the development of the industries and markets can be found in the "Macro-Economic and Sectoral Developments" chapter

Targets and Strategies

Strategic orientation of the Group

As already noted in the chapter "Business model and markets," Jenoptik's range of services is predominantly based on optical methods and technologies. High-precision, flexible photonics methods and processes will continue to enjoy an increasing share in industrial value creation as so-called "enabler" technologies and contribute to greater sustainability.

With a greater focus on photonics growth markets, we are on our way to becoming a streamlined and globally positioned photonics company.

Further information on the development of the photonics market can be found in the "Macroeconomic and Sectoral Developments" chapter

According to studies by Verified Market Research and Triton Market Research, for example, the photonics market is expected to experience annual average growth of between 6 and 8 percent from 2021 to 2028.

With the Strategy 2022 announced in 2018, Jenoptik focused on its core areas of expertise in optical and photonic technologies. The goal of addressing primarily those markets in which Jenoptik's technological expertise justifies a price premium is being consistently pursued by means of our strategic Agenda 2025 "More Value".

Information on the Group structure can be found in the "Business Model and Markets" chapter

Agenda 2025 "More Value"

Jenoptik is using its strategic Agenda 2025 "More Value" to focus on sustainable profitable growth in the photonics market segments. The transformation into a globally leading, pure photonics group is to be continued. We are focusing on three attractive core markets: semiconductor & electronics, life science & medical technology, and smart mobility.

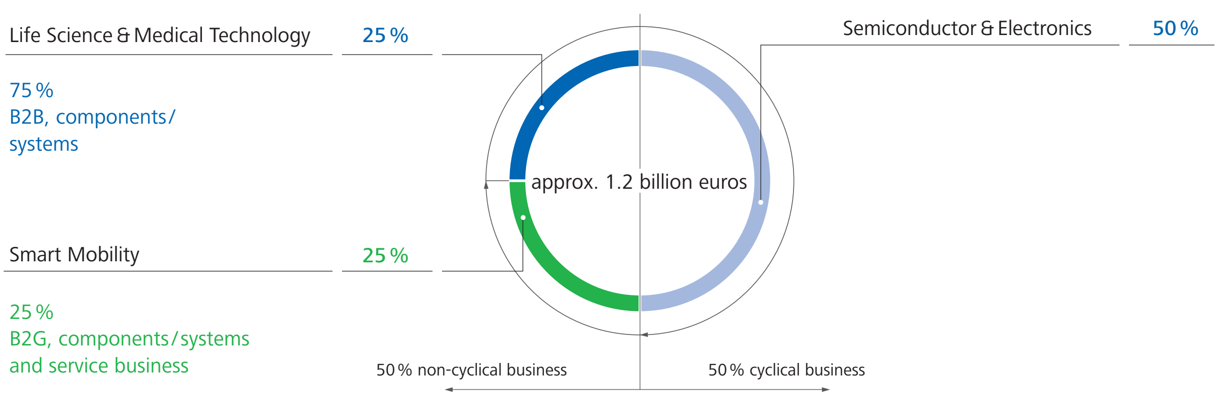
In order to create more value for all our stakeholders with the Agenda 2025, we also want to:

- drive organic and non-organic growth, and increase profitability,
- secure financial flexibility for further acquisitions and investments, and
- act in a socially and environmentally responsible manner.

Transformation into a pure photonics group

In recent years, Jenoptik has already aligned its product portfolio with the core photonics markets. The acquisition of TRIOPTICS, BG Medical, and the SwissOptic Group has contributed to this, along with the divestment of non-core activities (non-optical metrology for grinding machines and crystal growing). The sale of VINCORION at the end of June 2022 is a further significant milestone in the transformation towards a pure, globally leading photonics group.

G07 2025 – Jenoptik focuses on three core markts



Focusing on three core markets

For us, the three core markets of semiconductor & electronics, life science & medical technology, and smart mobility are markets that are not only growing at an above-average rate, but in which Jenoptik is also characterized by technological differentiation potential in the field of optics and photonics. With our range of services, we help our customers to solve complex photonic challenges and thus have a decisive influence on the performance of their products. This enables us to achieve higher prices. For 2025, we are striving to generate around 50 percent of group revenue in the semiconductor and electronics market, with around 25 percent in each of the life science & medical technology and smart mobility markets, as announced in November 2021.

At the same time, we want to position ourselves in such a way that our business remains resilient to market fluctuations. By 2025, we want to generate around 50 percent of our group revenue in markets that are less cyclical – this relates to our business in the life science & medical technology and smart mobility markets. The remaining portion of revenue is expected to be generated in market segments that are more cyclical, such as the semiconductor equipment industry.

Jenoptik profits in particular from the global trends in digitization, health, mobility as well as sustainability, and is increasingly establishing itself as a strategic systems partner for international customers, with whom it works to design forward-looking solutions.

The planned profitable growth will be further supported by efficiency measures, the realization of economies of scale, and increasingly also by the further expansion of the service business, especially in the Smart Mobility Solutions division.

2025 targets

We plan to increase revenue to around 1.2 billion euros, with an EBITDA margin of around 20 percent, by fiscal year 2025, as announced in November 2021. The revenue growth averaging around 8 percent per annum is expected to be achieved mainly organically, but also includes further portfolio changes. In 2025, we want to generate three quarters of our revenue in the photonics business in our Advanced Photonic Solutions division, and the remaining 25 percent in the Smart Mobility Solutions division.

The targeted improvement in the EBITDA margin is to be achieved primarily through an improved product mix, i.e. a successively increasing share of higher-margin products as well as economies of scale.

As part of the "More Value" Agenda 2025, we want to ensure sufficient financial flexibility for the scheduled profitable growth. In addition, we will focus more on the return on capital employed (ROCE), i.e. the yield on our employed capital, in the future. ROCE (excluding goodwill) is expected to increase to more than 20 percent by 2025.

Innovation

As an innovative high-tech company, it will remain crucial for Jenoptik to identify customer needs and trends at an early stage and to align strategic measures and business activities with them accordingly. Therefore, we still will be focusing on research and development – both in our own innovative products and for joint developments with our customers. This enables us to achieve competitive advantages which determine our performance and thus our economic success.

As a system partner, Jenoptik is constantly looking for new solutions in conjunction with customers. We are often already involved by our customers in the very early stages of the development processes. This enables us to strengthen our relationships and steadily boost value creation. At the same time, we also want to drive our own innovation forward independently of customer-related orders.

We will continue to invest in future applications, such as those in the areas of augmented and virtual reality. We also want to further expand our software expertise and our knowledge in the field of artificial intelligence.

In a medium to long-term time frame, we will be dealing with market segments that are currently still relatively small, but in which we see (1) enormous potential for market growth as well as (2) considerable influence of high-performance optical technologies. Among other things, this relates to the topic of quantum technology.

Further information can be found in the "Research and Development" chapter

Organic growth

In order to achieve our goals for 2025, we are planning significant organic growth. To achieve this, we want to

- further expand revenue from existing customers by making even better use of both the expanded technology base resulting from the acquisitions and the joint production capacities,
- win new customers, e.g. through the expanded joint expertise; and
- make significant investment in production capacities, including for example the construction of a new state-of-the-art production building for micro-optics and sensors in Dresden.

Active portfolio management to support the group strategy

In implementing Agenda 2025, we will focus on further acquisitions to optimize our portfolio. We want to use targeted acquisitions to further expand our market and customer access. We intend to round off our portfolio through complementary technologies and additional systems expertise. Key criteria for an acquisition are that the acquired company has a strong technological base and growth potential. In addition, the customer base should allow for regional expansion. The criteria of integrability and cultural fit are also relevant. Against the background of the planned focus on core photonic expertise, however, the discontinuation of existing business activities or the sale of parts of the company is also being continuously examined.

Internationalization

Due to the continuing strengthening of domestic industrial production in the Americas and Asia/Pacific regions, we continue to see particularly great potential for future growth in these regions. The further expansion of on-site value creation should help to better address local customer needs, providing support through regional service.

The acquisition of BG Medical and the SwissOptic Group has enabled us to further expand our global presence in strategically important markets with attractive locations and to significantly extend our global production network including modern clean room capacities. This will enable Jenoptik to better manage capacity utilization at the individual sites in the future, thereby realizing additional growth potential.

In the future, Jenoptik will also continue to invest in the establishment and expansion of new and existing sales and service structures. We rely both on our own direct distribution channels and on dealer structures.

Employees – our most important resource

In order to grow profitably in the long term, we must attract highly qualified and committed employees, and ensure their long-term retention in the company. Structured HR planning is necessary in all countries where we are present to achieve this in an environment which is becoming increasingly demanding from a demographic viewpoint. Jenoptik utilizes targeted employer branding to position itself as an attractive employer. Personnel development measures, an interdisciplinary and intercultural work environment as well as an open and dialog-oriented corporate culture should help to strengthen employees' loyalty to the company. The basis for this are our values – open, driving, confident – which help to bring Jenoptik's employees closer together across different cultural and legal systems. As part of our personnel work, the anchoring of the values in everyday corporate life is therefore a further focal point in the realization of our strategic objectives. As we are convinced that more diversity in the company leads to greater innovation and creativity, we have set ourselves diversity targets and defined measures to implement them: Further information on this can be found in the Non-financial Report.

We want to continue our cultural change in the years to come. Since we have made good progress in establishing a more open corporate culture, we will focus more on the values "driving" and "confident" in the slogan "Driving Confident Performance" until 2025.

Further information on employees and the corporate culture can be found in the Non-financial Report

Sustainability is part of our corporate strategy

For us, our corporate activities are not only aimed at achieving economic goals but are also an obligation to the environment and society. Consequently, the subject of sustainability is firmly rooted throughout the entire Jenoptik organization. As a so-called enabler, we want to use our innovative products and solutions to make an important contribution to overcoming social and climate challenges, and enable our customers worldwide to contribute more efficiently and sustainably to greater resource conservation and climate protection.

Further information on sustainability, measures and goals can be found in the Non-financial Report

Priorities for strategy implementation 2022

As part of the “More Value” strategy, we had set ourselves the following priorities for 2022:

- adaptation of the organizational structures to the new positioning of the Group,
- integration of BG Medical and the SwissOptic Group into the Jenoptik Group structure,
- expansion of our business in Smart Mobility Solutions,
- continuation of the integration of our Optical Test & Measurement business (including TRIOPTICS) and consistent addressing of growth regions.

The new organizational structure was established in the course of the first quarter of 2022. Jenoptik is now active with the two divisions Advanced Photonic Solutions and Smart Mobility Solutions. Non-photonic activities, particularly for the automotive market, are operated as independent brands within the Non-Photonic Portfolio Companies.

The integration of BG Medical and the SwissOptic Group is proceeding as planned. The SwissOptic Group continues to operate as an independent entity, integration is taking place gradually, and changes have already been made in the IT area.

The Smart Mobility Solutions division increased its revenue only slightly in 2022 due to supply bottlenecks at the beginning of the year. In contrast, the order intake increased significantly in the reporting year.

In the fiscal year 2022, we also continued the integration of our Optical Test & Measurement businesses to further promote the use of synergies. For example, processes were further aligned for this purpose.

Future strategic orientation of the operating business

The photonic divisions of the Group are interconnected in many ways, and infrastructures and cross-section functions are also being increasingly used jointly, for example for global procurement or in the expansion of the international sales network. Shared locations and the use of infrastructure facilitate market entry, enable the company to achieve critical mass more quickly in key regions around the world, and help to optimize the cost base through the leverage of synergies. Cost benefits are realized and currency risks minimized through global sourcing and production.

The business activities of the Advanced Photonic Solutions division will continue to focus on the semiconductor & electronics and life science & medical technology markets. Here we use our expertise in photonics as a key technology and, as an enabler, want to support our customers in improving their competitiveness and environmental sustainability. In 2025, the division aims to achieve revenue of around 600 million euros in the semiconductor & electronics market and around 300 million euros in the life science & medical technology market.

The acquisition of BG Medical and the SwissOptic Group in 2021 has enabled us to strengthen our global photonics business and, in addition to the semiconductor equipment business, noticeably expand the medical technology business in particular. The acquisition has significantly expanded the global production network including modern clean room capacities at sites in Berlin, Heerbrugg (Switzerland) and Wuhan (China). In the future, this will enable the division to better manage capacity utilization at the individual sites and to exploit cost advantages. In addition, the acquisition has given the division better access to Asian customers and suppliers, enabling it to realize additional growth potential.

We are continuing to consistently focus our optical and micro-optical systems business in the Semiconductor & Advanced Manufacturing area on the “digitization” mega trend, which market assessments, such as those from Researchandmarkets, indicate is set to intensify. In addition, we believe that Jenoptik can benefit from the trend that both the USA (US Chips Act) and Europe (European Chips Act) are attempting to bring semiconductor production, which is currently mainly located in Asia, back to these regions. In order to meet the expected further increased demand for chips, and therefore also for the equipment required to manufacture them, targeted investments are being made, such as in a new highly functional clean room factory in Dresden.

Through ongoing internationalization, including in Asia, expansion of the systems business, focus on key customers as well as the use of economies of scale we aim to achieve further sustainable profitable growth. The semiconductor business of the SwissOptic Group, acquired in 2021, further rounds off the product portfolio in the semiconductor equipment sector with a complementary range, enabling existing and new customers to be offered an even broader range of solutions. In the long term, we also want to position ourselves even more strongly as a system-relevant supplier to our customers.

On the basis of our optical and micro-optical solutions, we aim to target further markets in the digital world in addition to the semiconductor equipment sector. Jenoptik is already positioning itself in the market for optical information and communication technology, where we expect further growth. The focus here is on optical data transmission and laser material processing, where we intend to concentrate on high-end components and intelligent system solutions. In order to also successfully target these high-tech markets in the future, innovation, technological development, and differentiation remain key issues.

In the Biophotonics sector, we are focusing on the "health" mega trend. We want to position ourselves even more strongly as one of the leading and profitably growing partners for the development of photonic modules and system solutions for the medical technology and life science industries. In doing so, we rely on our product portfolio with light sources and imaging systems for diagnostic and analytical applications in the life science sector as well as laser-based solutions and camera systems for diagnostic and therapeutic applications in ophthalmology, aesthetics, dentistry, as well as minimally invasive and robotic surgery. To do this, we are focusing both on the development of customer-specific products and on unique selling points.

In the area of Optical Test & Measurement, combining expertise in optics and industrial imaging will enable us to further expand what we consider to be a technologically leading position and gain associated market shares. Here we can rely on what we consider to be good positioning in terms of the measuring accuracy of our systems and many years of experience in testing and measurement in large-volume production. We see important potential here, for example, in the growing markets for new virtual and augmented reality applications in the industrial and consumer segments. With its well-developed presence and established access to key TRIOPTICS customers in Asia, Jenoptik wants to expand its existing market shares in strategically important markets such as China, Taiwan, and Korea. In addition, by expanding our range of services, we expect to further strengthen our position in North America, particularly with regard to local customers in the digital and communications sectors.

We are also participating in the trend for more mobility and efficiency with innovative industrial applications. One focus of business activities is on expanding volume business with optoelectronic and polymer optical high-performance components and modules. In addition, we are continuing to pursue promising growth options with technologies for innovative applications centered on our core areas of expertise, such as driver assistance systems or technologies for autonomous driving (LiDAR). We also want to become an internationally operating supplier in these fields.

In addition, the Advanced Photonic Solutions division also includes laser material processing. In the context of smart manufacturing, we are focusing on the automated processing of plastics. We believe that our solutions can help to optimize production steps, thereby creating more efficiency for our customers. We want to further establish ourselves as a niche supplier focusing on the core business of laser airbag weakening.

In the Smart Mobility Solutions division, we are pursuing two further future trends with the focus on mobility and public safety. In the field of traffic monitoring systems, we continue to support our customers – primarily public-sector customers (B2G) – in achieving their targets to improve traffic safety with complete solutions. Urbanization and digitization of smart cities lead to moderate but sustainable growth in demand for traffic regulation and control. Initiatives such as "Vision Zero" also contribute to this. The coronavirus pandemic and climate change have also intensified discussions about traffic management in inner cities, congestion charges and clean air zones. In addition, the threat of terrorist attacks and regional lockdowns has increased the need for protection and proactive policing.

In the coming years, the Smart Mobility Solutions division wants to continue to grow both organically and through acquisitions, increasing revenue to around 300 million euros by 2025. The expansion of the value chain and customer relationships, especially in North America, should contribute to the organic growth. Furthermore, we want to establish a product portfolio with a platform approach. The goal is to offer entry-level products for emerging markets and high-end solutions for developed, homologated markets with additional applications/functionalities. To do this, we want to expand our technology and software expertise and make greater use of artificial intelligence. Our goal is to implement our product road map and new business models, which include software-as-a-service. We will continue to expand our partner network and will work closely with a small number of technology partners to accelerate new product launches. Our investment in deep learning will continue to help increase the performance and functionality of our systems in coming years.

In addition, possible acquisitions should help to expand the market share and the share of the value chain or to expand the technology or product range.

In the global traffic safety technology market, there is also a noticeable trend towards larger projects with a combination of equipment business and services, known as traffic service provision. That is why we are focusing on strengthening this profitable service business. By 2025, the share of recurring revenue is expected to increase to approximately 50 percent of the division's revenue. In addition to road safety, adjacent markets such as civil security and road user charging are also gaining in importance. Based on the existing systems and software applications, the division aims to develop into an integrated solution provider for civil security and future smart cities, while at the same time positioning itself for a future in which autonomous driving is part of everyday life. In the future, we also want to develop new technologies and solutions which are optimized for emerging sectors such as networked and autonomous vehicles.

With the Non-Photonic Portfolio Companies, we are, as a supplier of products, automation solutions and services for industrial customers, primarily addressing the trend towards more flexibility and efficiency in production processes, particularly in the automotive industry.

In the area of Automation & Integration, we offer our own products and systems, automated system concepts through to complete process solutions for efficient manufacturing environments.

With its inspection and production measurement technology, Jenoptik offers solutions for reducing fuel consumption and CO_2 emissions, particularly in combustion engines. However, the business is significantly influenced by the current trend in the automotive industry towards more and more e-mobility. We will continue to focus on the development of applications in the area of e-mobility as well as outside the automotive industry, for example in production metrology for machining processes.

Strategy development and processes

Strategy development for the Group and the divisions – as most recently in 2021 with the further development from "More Light" to "More Value" – is followed by a phase of strategy implementation lasting several years. The Corporate Center and the divisions work closely together on strategic planning and the implementation of measures. The focus is primarily on the most important cornerstones for underpinning the Group's growth targets.

In the annual strategy reviews with the Executive Management Committee and the Supervisory Board, on the one hand the strategic orientation is validated on the basis of current market developments, whereby there may be selected adjustments to the strategic road map. On the other hand, current focal points, which underpin the strategic goals and further advance active portfolio management, are discussed and approved. In addition to targeted investment in organic growth, this may also be supported by company acquisitions.

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Further information on the segments can be found in the Segment Report and the "Business Model and Markets" chapter

Control System

The corporate control system is geared toward the long-term corporate strategy and the Group's short to medium-term objectives. The Executive Board is responsible for overall planning and thus for achieving the stated objectives as part of the strategic corporate development.

With the support of the Executive Management Committee (EMC), the Executive Board uses a strategy process to steer the development of the business units. It monitors the implementation of defined measures at quarterly business reviews. On the basis of global trends, growth paths are defined, opportunities and risks are evaluated, portfolio decisions are made, and the focuses of in-house research and development are determined using technology roadmaps at annual strategy meetings. Strategy and planning meetings provide a planning basis for the following year and in medium-term group planning.

A planning forecast for the coming year and a five-year period is made annually on the basis of the long-term corporate strategy. It is based on the market-driven strategic planning of the key indicators that uses a bottom-up/top-down approach.

In the course of a fiscal year, the planning for that year is updated in several forecast cycles. Alongside quarterly forecasts, a rolling three-month forecast for revenue and order intake updated monthly is used to manage the company's development.

For operational management purposes, the monthly results of the Group and the divisions are discussed at the EMC meetings. At these meetings, the division heads/regional managers report to the Executive Board on the economic situation, the development of customer relationships, the competitive situation, and any special business events. Their reports employ standardized reporting methods and special analyses largely involving performance indicators, information parameters, and qualitative assessments, which are then used to define further operating and strategic measures to achieve the objectives in the event of planning deviations. The internal reports for the monthly Executive Board meetings provide aggregated financial and non-financial information for the divisions and the Corporate Center, which is essential to managing the Group on a global level, allocating resources in a targeted manner, and passing resolutions on the Executive Board.

G08 Performance indicators for corporate management

	Financial indicators		Non-financial indicators	
Key performance indicators	Growth	Revenue, order intake, capital expenditure		
	Liquidity	Cash conversion rate		
	Profitability	EBITDA margin		
Information parameters	Growth	Order backlog	Environment	Green electricity ratio, CO_2 reduction
	Return	ROCE	Employees	Diversity ratio, engagement score
	Profitability	EBIT margin	Suppliers	CSR rate (sustainable supply chain)
	Liquidity	Net debt, working capital	Innovation	Vitality index

A business intelligence environment enables and supports continuous improvement in business development analysis, reporting, and planning processes.

The indicator system used in internal reports and to manage the business units in 2022 comprises the "key performance indicators" (high-priority performance indicators). It also covers other financial and non-financial information parameters. All the indicators focus on shareholder value, the interests of our stakeholders, the requirements of the capital market, and the corporate strategy. The key indicators are shown in chart G08.

Information parameters such as order backlog, number of employees, or non-financial indicators are used for management purposes at business unit level. The most important non-financial information parameters (sustainability indicators) are taken into account in Executive Board remuneration and group financing.

Explanation of the indicator base

EBITDA means earnings before interest, taxes, depreciation, and amortization (including impairment losses and reversals) in the continuing operations. The EBITDA margin is the ratio measuring EBITDA to revenue.

The free cash flow is calculated from the cash flows from operating activities before tax payments, less capital expenditure and receipts from the sale of intangible assets and property, plant, and equipment.

The cash conversion rate is the ratio measuring free cash flow to EBITDA.

The ROCE (return on capital employed) is calculated by dividing income from operations (EBIT) by the average capital employed. The average capital employed comprises non-current non-interest-bearing assets (e.g., intangible assets including goodwill, property, plant, and equipment, and investment property) and current non-interest-bearing assets (essentially made up of inventories, receivables from operating business, and other current receivables), less non-interest bearing borrowings (e.g., provisions – excluding pensions and taxes –, liabilities from operating business, and other current liabilities). The calculation of averages uses the twelve month-end balances in the period under review and the opening balance at the start of the year.

For more information on the non-financial information parameters, see the Non-Financial Report

For information on the planned development of key performance indicators, see the Forecast Report

Research and Development

As a technology group, research and development (R+D) is of key importance to Jenoptik. Our products and services give us competitive advantages which determine our performance and thus our economic success. One of our key strategic aims is therefore to expand our innovative capabilities in the photonics growth markets and to be a driver of innovation. We also develop technologies, products and platforms with unique selling points, protecting them where possible by means of industrial property rights. With our products and solutions, we do not only want to improve our customers' performance and profitability, we also want to contribute to greater energy efficiency and the responsible use of resources. In doing so, Jenoptik functions as a so-called "enabler".

Innovation management is an important tool used by Jenoptik to systematically identify and implement promising ideas. With networked processes, its primary intention is to generate capital from knowledge by uniting market and corporate viewpoints. Our innovation management has a uniform group-wide process landscape which is adapted within the divisions to meet the requirements of the respective industry. These framework conditions help to drive developments forward in order to make positive value contributions for the entire Group. Innovation management at Jenoptik lies within the remit of the Chairman of the Executive Board. In innovation management, the focus on photonics is further strengthened by the instruments of continuous improvement (Kaizen) as well as process-related anchoring.

The innovation team therefore works closely with various areas of business, such as controlling and investment management, and is intensively involved in the rolling strategy and planning processes.

Innovation process

Innovation, development and operational excellence in the launch of new products are one of the pillars of the Strategy 2025. The first stage of the Jenoptik innovation process involves identifying growth potential based on a strategic analysis of global trends and the requirements of our customers. Innovation projects are then created in line with our core areas of expertise and often with the direct cooperation of key customers. Strategic development projects are planned in road maps on the basis of corresponding milestones. This applies to product, technology and process innovations. Innovation projects can now be implemented more quickly in the early phases of development, enabling innovative solutions to reach the market sooner. With the introduction of the Jenoptik Business Systems (JBS) a standardized product planning group will be established at the operational level. This will make it even easier to prioritize projects in a targeted manner, adapt products to market needs, and continuously fill the product pipeline.

Including customer-specific developments, our R+D output amounts to 8.9 percent of revenue. We measure the success of our innovation activities using the Vitality Index. The percentage of revenue with products and platforms developed in the last three years is expected to increase continuously as a percentage of total revenue. In the past fiscal year, the Vitality Index increased to 23.7 percent compared with the prior year (prior year: 22.2 percent). Thus, the target value of 20 percent for 2022 was exceeded. In order to be viable on the market and to target new markets, we must rely both on our own developments and on those with external cooperation partners in order to produce more agile innovations.

Innovation culture

In addition to the creation of an optimal process-based innovation landscape, strengthening the innovation culture also plays an important role in exploiting the full potential of our company. Central here are communication, networking and the transfer of knowledge. Examples include best practice communities, creative co-working and employee podcasts for technology and innovation.

New areas of technology and use were further investigated in the reporting year. The emerging technology field of quantum technology, in which photonic components play an essential role, deserves special mention. With areas of use such as quantum computing, quantum communication and quantum sensing & imaging, numerous disruptive applications are expected to emerge here in the future. With its photonic expertise, Jenoptik is already supplying components to companies and the scientific community at this early stage. In order to continue to promote innovative projects in the area of new photonic technologies and other areas in the future, an additional innovation budget is available in Innovation Management. In addition, Innovation Management coordinates the opportunities for external research funding to support innovative projects and ideas.

Employees in research and development

The experience and expertise of our employees are essential to the success of our research and development work, and the qualification standards we expect of them are correspondingly high. Their knowledge is used both for specific tasks and across all divisions in corresponding development projects. In total, 641 employees worked in Research and Development in 2022 (prior year: 599 employees). T04

T04 Employees in R+D[1]

	2022	2021
Number of employees in R+D	641	599
Percentage of overall workforce (%)	14.1	14.2

[1] Values relate to the continuing operations without VINCORION

Memberships in associations

Jenoptik procures additional external expertise with the help of targeted cooperation arrangements. Through research cooperations, projects can be realized in a market-driven manner, development times can be reduced and specialist expertise can be successfully built up. Jenoptik works with both universities and non-university research institutions as well as with industrial partners and key customers.

Jenoptik is also active in numerous industry and technology-oriented associations. Examples include the Optonet Photonics Network at regional level, SPECTARIS at national level and the European Photonics Industry Consortium (EPIC) at European level. In addition to active membership, the future aim is to interact more closely with the above networks in order to exploit the range and cooperation potential for disruptive innovations. Jenoptik is also active in the field of quantum technology, becoming a member of the European Quantum Industry Consortium (QuIC) in 2022. The Group is also set to join the Quantum Economic Development Consortium (QED-C) in 2023.

Development output

At 87.1 million euros, the R+D output including developments on behalf of customers was up on the prior year (prior year: 63.6 million euros). The R+D expenses also increased significantly to 54.6 million euros (prior year: 38.9 million euros). The costs for developments on behalf of customers increased to 28.0 million euros, primarily due to the contribution of the Advanced Photonic Solutions division, and are included in the cost of sales (prior year: 20.3 million euros). In 2022 development services including patents were capitalized in the amount of 4.5 million euros (prior year: 4.4 million euros). The capitalization rate, i.e. the capitalized development costs divided by total R+D expenses, reduced to 8.2 percent in 2022 (prior year: 11.3 percent). Information on the depreciation of internally generated intangible assets can be found in the section “Intangible assets” in the Notes.

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R+D output is distributed among the divisions as shown in the table T05.

R+D output in the Advanced Photonic Solutions division included expenses arising from developments on behalf of customers in the amount of 25.1 million euros (prior year: 17.3 million euros), which were significantly above the previous year's value, especially in the semiconductor equipment and biophotonics segment. The R+D expenses in 2022 amounted to 34.8 million euros (prior year: 20.2 million euros).

The R+D output of the Smart Mobility Solutions division included developments on behalf of customers of 0.8 million euros (prior year: 0.6 million euros). The R+D expenses came to 15.5 million euros (prior year: 14.4 million euros).

In 2022 the R+D output of the Non-Photonic Portfolio Companies was 5.6 million euros (prior year: 6.7 million euros). Of this, 2.1 million euros were developments on behalf of customers (prior year: 2.4 million euros).

Patents

Our R+D capital expenditure is protected via central IP management in close cooperation with the operating areas. We are increasingly focusing on high-quality applications and internationalize these in important growth markets such as China and the USA. In 2022, a total of 26 new first patents were filed by Jenoptik subsidiary companies (prior year: 25 patents) as well as a further 32 subsequent international registrations carried out. The focus continued to be in the area of optical components and optical modules.

The number of patents does not include registered designs, utility models or brand registrations. For competition reasons, Jenoptik does not publish information on the receipt and issue of licenses.

Key projects and results

The solutions described in the table T07 are some of those developed and brought to the market by Jenoptik in 2022.

T05 R+D output by segment (in million euros)

	2022	2021	Change in %
Group	87.1	63.6	36.9
Advanced Photonic Solutions	63.1	41.9	50.6
Smart Mobility Solutions	17.6	15.0	17.2
Non-Photonic Portfolio Companies	5.6	6.7	−17.2
Other	0.8	0.0	

T06 R+D output[1] (in million euros)

	2022	2021	2020	2019	2018
R+D expenses	54.6	38.9	39.4	44.1	47.4
Capitalized development costs including patents	4.5	4.4	4.0	4.0	1.5
Developments on behalf of customers	28.0	20.3	13.5	20.4	20.2
R+D output	87.1	63.6	56.9	68.4	69.2
R+D ratio 1 (R+D output/revenue) in %	8.9	8.5	9.2	8.0	8.3
R+D ratio 2 (R+D expenses/revenue) in %	5.6	5.2	6.4	5.2	5.7

[1] Values for the years 2018 to 2019 are data for the Group including VINCORION

T07 Key projects and results in 2022

Market	Products and solutions developed and launched in 2022
Semiconductor equipment	Semiconductor lithography and inspection machines: • Optical assemblies and modules for use in systems for the EUV wavelength range as well as novel manufacturing technology for the production of even higher performance micro-optical products • Introduction of a new, complex coating technology in order to continue to provide the best possible support in the DUV wavelength range for the constantly increasing demands on extreme quality and service life for high-precision optical and micro-optical products Specific product and technology optimizations: • Especially for optical components with regard to improved manufacturability, yield and greater production throughput in order to increase production capacity
Information and communication technology	The UFO Probe™ Card enables electronic as well as optical components on wafers to be tested simultaneously with only one probe card – without active setup on each individual chip. In 2022, the UFO Probe™ Card was awarded the 25th Thuringia Innovation Prize in the "Industry & Material" category. ImageMaster® HR 2 is the completely revised new version of the ImageMaster® HR – the global standard for image quality testing of small and medium sized lenses, e.g. for smartphone, photo and film cameras, with improved usability, high reproducibility and extended range of measurable samples. OptiSurf LTM with Lens Gage System for the contactless measurement of center thickness without information on the lens material and determination of group refractive index / glass type of lenses. ATS-C – CNC alignment rotation for short cycle times and the rapid integration of the machine into existing production processes with optimized cycle times, processing of free-form cell designs and intuitive machine operation for quick and easy implementation.
Life science and medical technology	Photonic solutions for diagnostic and therapeutic applications in the area of light sources and imaging systems, laser-based solutions and camera systems in ophthalmology, aesthetics, dentistry as well as minimally invasive and robotic surgery, such as: • Further development of existing device series in the area of DNA sequencing to make them more robust, cost-effective and high-performance. • Next-generation white light sources with improved imaging and illumination for vitreoretinal surgery, cataract surgery and endoscopy. • The new 760-nm wavelength facilitates the effective treatment of different skin and hair types with just one hand-held device. Laser bars with three different wavelengths can now be installed in the Jenoptik multi-wavelength laser stacks. • Newly developed digital microscopy subsystem JENOPTIK SYIONS® Raman module for point-of-care applications for targeted, personalized diagnostics in the context of antibiotic therapies.
Laser material processing	• New JENscan® product family for chipless laser material removal for ultimate precision and process stability. • JENSCAN® STYLE facilitates light design for the individualization of vehicle interiors and exteriors via the partial removal of the non-transparent coating of the translucent plastic components. • The prototyping technology of JENscan® Tire is used to manufacture newly designed tires based on the CAD model. This allows for significantly faster development cycles in the tire industry.
Traffic safety technology	• Further development of the SR390 radar-based system for traffic monitoring with enhanced functions such as illegal turning, illegal lane changing or tailgating violations. • TraffiPole, the winner of the Intertraffic 2022 Green Globe Award, has been ergonomically improved for increased heat dissipation and lower production costs. • New products GardoVia and NexoVia for the traffic enforcement, civil security and road user charging markets were presented in the reporting year. • 2022 saw the delivery of a new generation of Jenoptik TLE backoffice software for traffic monitoring, TraffiDesk pro, for the processing of violation data. • Creation of the first multi-platform algorithm libraries called libAlgo, initially for DL ANPR, and in the future for other algorithms. Integration of video analytics into the Vector platform to improve recognition rates in challenging environments and to identify illegal driver behavior.

Employees

Development of employee numbers

As of December 31, 2022, with 4,435 employees (incl. trainees), Jenoptik recorded growth of 5.5 percent in its workforce (31/12/2021: 4,205 employees). The number of Jenoptik employees abroad rose by 4.6 percent to 1,595 (31/12/2021: 1,525 employees). At 36.0 percent, the proportion of employees working abroad has remained constant in comparison with the prior year (31/12/2021: 36.3 percent).

Temporary workers were also employed in the past fiscal year to cover production peaks and short-term order intakes as well as for major projects. They were employed mainly in the operating areas and the number fluctuated during the year. On the reporting date of December 31, 2022, 114 temporary workers were employed by Jenoptik (31/12/2021: 130).

At 347.2 million euros, personnel expenses in 2022 (wages, salaries, social security contributions, costs for retirement provision) were up 26.5 percent compared with the prior year's figure of 274.4 million euros. In addition to the usual salary increases, the rise resulted primarily from the growth in the workforce in the semiconductor equipment area in the Advanced Photonic Solutions division, and from the first-time inclusion of BG Medical and the SwissOptic Group for the full year.

Revenue per employee (including temporary employees) measured in full time equivalent rose by 18.4 percent to 235.8 thousand euros in the fiscal year 2022 (prior year: 199.2 thousand euros).

T08 Employees by region (incl. trainees)

	31/12/2022	31/12/2021	Change in %	Absolute change
Germany	2,840	2,680	6.0	160
Germany in %	64.0	63.7		0
Abroad	1,595	1,525	4.6	70
Abroad in %	36.0	36.3		0
Europe (excl. Germany)	593	544	9.0	49
America	592	569	4.0	23
Asia/Pacific	410	412	−0.5	−2

The employee age distribution, as can be seen in the table below, is balanced. The figures are largely unchanged compared with the prior year.

The proportion of women (in Germany and abroad) was 30.5 percent on December 31, 2022, an increase in comparison with the prior year (31/12/2021: 28.4 percent).

At 6.5 percent, the absenteeism rate among Jenoptik employees in Germany in 2022 was above the level of the prior year (prior year: 4.6 percent). This effect is also in line with the general trend in Germany. The fluctuation rate increased to 7.1 percent compared to the prior year (prior year: 5.9 percent). This is a fundamental trend in the labor market and reflects the current rather employee-driven applicant market. The fluctuation rate is calculated by dividing the number of employees leaving the company in the fiscal year by the number of employees as of the reporting date of the prior year plus those who joined the company in the fiscal year. Temporary workers are not included in the calculation.

T09 Revenue per employee (in thousand euros)

	2022	2021	Change in %
Revenue per employee (including temporary employees)	235.8	199.2	18.4

T10 Group age distribution of continuing operations

	under 30	30–39	40–49	50–59	60–65	over 65	Total
31/12/2022	15.9%	29.7%	24.7%	21.1%	7.1%	1.5%	100.0%
31/12/2021	14.7%	28.0%	24.1%	23.3%	7.8%	2.2%	100.0%

Training & HR development

As of December 31, 2022, 154 trainees and students of the Cooperative State Universities were employed in the continuing operations (31/12/2021: 152). Of these, 47 were new hires (prior year: 36). At the same time, 37 trainees and students of the Cooperative State Universities were able to successfully complete their training in the reporting year (prior year: 25).

At the Villingen-Schwenningen, Jena, and Triptis sites, the new trainees receive job-specific training for optical, precision engineering, electronic, and commercial occupations in training centers. Jenaer Bildungszentrum gGmbH – Schott, Zeiss, Jenoptik – in which Jenoptik is a partner, has now established itself as a training center for optics and photonics at a national level.

At around 2.7 million euros, Jenoptik invested more in the professional development of its employees in 2022 than it did in the prior year (prior year: 1.9 million euros). The rise is primarily due to the integration of the SwissOptic Group, but also includes an increase in costs due to catch-up effects and a higher number of in-person events following the end of the stringent coronavirus measures. These costs include both the expenses for trainees and students at the Cooperative State Universities and the costs for further training of our employees. The overall development needs in the Group are assessed in regular staff appraisals. Suitable qualification measures are then derived from these and implemented.

Further information on this can be found in the Non-financial Report

Economic Report

Macro-economic and Sectoral Developments

In 2022, the global economy was weighed down by three main factors: the global fight against inflation, the war in Ukraine, and a revival of the Corona pandemic in China. However, over the course of the year, the global economy proved more resilient than initially feared, as the International Monetary Fund (IMF) reported in early January 2023. In many countries, consumer spending and investment had proved more robust than forecast in the third quarter of 2022. In addition, inflation had peaked in many countries, which was now leading to better financing conditions. Government action to mitigate the impact of the energy crisis on companies and private households has had a positive effect, according to the IMF, as has the increasing economic momentum in global trade. Supply bottlenecks have eased, transport costs have fallen, and this has led to an upswing in previously constrained sectors, such as the automotive industry. According to the IMF, however, in the final quarter this positive development weakened in many industrialized nations – with the exception of the US; many economic indicators such as indices on business and consumer confidence pointed to a slowdown.

According to the National Bureau of Statistics of China, the Chinese economy grew just 3.0 percent in 2022 compared to the prior year, when it had grown 8.4 percent. This meant that China also missed its own GDP target of 5.5 percent, partly due to its long-standing zero-Covid policy and strict lockdowns.

T11 Change in gross domestic product (in percent)

in percent	2022*	2021
World	3.4	6.2
USA	2.0	5.9
Eurozone	3.5	5.3
Germany	1.9	2.6
China	3.0	8.4
India	6.8	8.7
Emerging countries	3.9	6.7

Source: International Monetary Fund, World Economic Outlook (Update), January 2023
* Estimate

Despite high inflation and rising interest rates, the US economy posted year-on-year price-adjusted growth of 2.1 percent in 2022, according to the US Department of Commerce. After a weak start, annualized gross domestic product (GDP) rose 2.9 percent in the final quarter, slightly lower than the 3.2-percent increase in the third quarter. Key interest rate hikes to combat inflation slightly dampened economic activity – companies did not increase their investments in the fourth quarter as much as in the summer; exports decreased by 1.3 percent, imports by as much as 4.6 percent compared with the prior quarter. In 2022, the US passed the Inflation Reduction Act (IRA), an important scheme to promote domestic factories for green technologies, for example for electric cars, the hydrogen economy, or wind farms.

Despite inflation, the war in Ukraine, the energy crisis, and supply chain issues, GDP in Germany rose 1.8 percent year-on-year in 2022, as stated by the German Federal Statistical Office in late January 2023. A significant portion of this growth, however, was seen in the first quarter, before the stresses of the Ukraine war became apparent. In the final quarter, GDP declined 0.2 percent on the prior quarter, contrary to the expected stagnation, mainly due to lower consumer spending. For the year as a whole, industrial production fell 0.6 percent year-on-year. Despite recovering over the course of the year following a sharp slump in the spring, as reported by the Federal Statistical Office, it fell again and unexpectedly at the end of the year. Reasons included declining production in the construction industry and renewed curbs on production in energy-intensive industries such as metals, chemicals, and paper. In the context of a weak global economic environment, exports also fell at the end of the year, as reported by the Federation of German Industries (BDI). For the year as a whole, the German export industry would have exported more than ever before and exceeded the previous record value from 2021 by 14.3 percent. This, however, was due to price increases; adjusted for prices, German exports would have grown 2 percentage points less than global trade in 2023, according to the BDI.

Photonics is considered a key enabling technology for many future markets. Many photonics applications have made a significant indirect contribution to containing the pandemic and are assisting in the digital transformation. For the German photonics industry and on the basis of performance in the first half-year 2022, the Spectaris industry association expects annual revenue in the industry to have increased in the high single-digit percentage range from the 47 billion euros in the prior year.

The global semiconductor industry had another record year in 2022, as reported by the Semiconductor Industry Association (SIA). Global revenue rose 3.2 percent to 573.5 billion US dollars, although demand did slow toward the end of the year. The Americas region saw the strongest growth for the year as a whole, and China remained the largest single market. Based on its provisional figures, market observer Gartner reported that worldwide semiconductor revenue grew only 1.1 percent to 601.7 billion US dollars in 2022. As it states, inflation and a weak economy reduced demand for PCs, memory chips, and smartphones in the second half of the year.

Semiconductor equipment manufacturers had a record year: According to its initial assessment at the end of the year, the Semiconductor Equipment and Materials International (SEMI) industry association reported that global revenue was 5.9 percent up on the prior-year figure, at 108.5 billion US dollars. China, Taiwan, and South Korea were again the regions with the highest level of investment.

Despite the difficult situation, 2022 was a strong year for the German electrical and digital industry, as reported by the German Electrical and Electronic Manufacturers' Association (ZVEI). According to its figures, production rose 3.7 percent from January through November, almost exactly in line with the annual forecast of 4 percent growth. Year-on-year revenue increased 12 percent to 224 billion euros, with the strongest growth seen in electronic components, followed by information and communications technology, batteries, energy technology, and automation systems.

According to VDMA Machine Vision, the German machine vision industry generated revenue of 3.3 billion euros last year, 8 percent more than in 2021, as most recently stated in October 2022. The strongest demand came from abroad.

Based on data supplied by the German Federal Statistical Office, Spectaris most recently reported its expected 2022 earnings for the German medical technology industry in November 2022. The association is expecting year-on-year industry growth of 3.5 percent, equating to revenue of 37.7 billion euros. Burdens included the war in Ukraine, major supply chain disruptions, drastically rising material, energy, and logistics costs, and the impact of the European Medical Devices Regulation. According to market researcher Fortune Business Insights, the global market volume was 495.5 billion US dollars in 2022, slightly up on the prior-year figure of 489 billion US dollars.

Burdened by the overall economic situation and international supply chain issues, the German mechanical and plant engineering industry posted an overall decline of 4 percent in order intakes, despite initial growth in orders over the first three quarters, as demand for capital goods dropped off toward the end of the year – in the final quarter by a considerable 16 percent on the prior year, as reported by the German Mechanical Engineering Industry Association (VDMA). The VDMA had been assuming a small production increase of 1 percent for 2022. According to the VDMA, machine production in China was similarly weak, while in the US it was 5 percent above the prior-year figure. Global revenue was 3 percent up on the prior year, according to VDMA calculations.

The automotive industry was impacted by supply bottlenecks and material shortages, particularly for semiconductors, rising prices, and regionally exacerbated, additional shortages in the value chain, reported industry associations. The situation did, however, improve by the end of the year, allowing automakers to start working off their high order backlogs. By contrast, many automotive suppliers remained in crisis mode, mainly as a result of disrupted supply chains and cost increases for raw materials and logistics.

According to calculations by analysts MarketsandMarkets, the revenue volume of the global market for traffic safety technology in 2022 was 4.035 billion US dollars, 9.4 percent more than in the prior year. In Germany, the German Federal Statistical Office's provisional accident statistics for 2022 indicated an increase in the number of road deaths compared with 2021, which was at an all-time low partly due to lower traffic volumes during the coronavirus pandemic. In the US, the National Highway Traffic Safety Administration (NHTSA) reported at the beginning of 2023 that the number of road deaths had fallen slightly in the first nine months compared with the same period in the prior year – the second quarter in succession after almost two years of rising figures.

Legal Framework Conditions

The legal framework conditions governing business operations essentially remained constant in 2022 and therefore had no significant impact on the business development of the Jenoptik Group.

Earnings, Financial, and Asset Position

Comparison of actual and forecast course of business

On release of the preliminary results in February 2022, the Jenoptik management forecast further profitable growth for the fiscal year 2022 on the basis of a good order intake in the fourth quarter of 2021, a high order backlog, and ongoing promising developments in the core photonics businesses, especially the semiconductor equipment business. On publication of the final figures on March 29, 2022, the Executive Board confirmed this guidance. It expected revenue growth of at least 20 percent for the continuing operations in 2022, including BG Medical and the SwissOptic Group, which were consolidated for a full fiscal year for the first time. It also anticipated strong year-on-year growth in EBITDA (earnings before interest, taxes, depreciation, and amortization, including impairment losses and reversals) excluding the one-off effect. The EBITDA margin was expected to be around 18 percent. This outlook was confirmed on publication of the first-quarter earnings 2022.

On the basis of the good performance in the first half of 2022 and the well-filled project pipeline, the Executive Board raised its guidance for 2022 in the continuing operations on publication of the half-year earnings in August 2022. At this time, it expected revenue to come in at between 930 and 960 million euros. EBITDA was also expected to increase significantly year-on-year excluding the one-off effect, with the EBITDA margin improving accordingly to between 18.0 and 18.5 percent.

In view of the good performance in the first nine months, the Executive Board specified its August guidance at the end of November 2022 and now expected revenue in the upper half of the existing range of between 930 and 960 million euros and an unchanged EBITDA margin of between 18.0 and 18.5 percent.

In the year covered by the report, Jenoptik generated revenue of 980.7 million euros, which was slightly above the upper end of the expected range.

The group EBITDA margin rose to 18.8 percent (prior year: 16.7 percent (excluding one-off effect / 20.7 percent including one-off effect), thus exceeding the forecast range of 18.0 to 18.5 percent.

Revenue and EBITDA of the divisions and their forecast development are shown in the table.

Following the strong order intake in 2021, the Executive Board expected more restrained growth in the fiscal year 2022. At the end of the year, the order intake was higher than expected, in particular due to business with the semiconductor equipment industry.

In the March forecast, a cash conversion rate of 45 to 55 percent had been assumed, and the actual rate achieved by the end of 2022 was 44.9 percent (prior year: 27.7 percent).

It was expected that capital expenditure in the fiscal year 2022 would be significantly above the level in the prior year. Capital expenditure amounted to 106.0 million euros and was thus, as expected, sharply up on the figure of 49.9 million euros in the prior year. T12

Earnings Position

The tables in the Management Report, which show a breakdown of the key indicators by segment, include the Corporate Center (holding company, shared services, real estate) and consolidation effects under "Other". Jenoptik operates in the following reportable segments: the Advanced Photonic Solutions division, the Smart Mobility Solutions division, and the Non-Photonic Portfolio Companies.

Unless otherwise specified, the following text shows the figures for the continuing operations (the Advanced Photonic Solutions and Smart Mobility Solutions divisions and the Non-Photonic Portfolio Companies). Following signing of the contract to sell VINCORION in November 2021, this division is shown as a discontinued operation in accordance with IFRS 5 and is therefore no longer included in the revenue, EBITDA, order intake, or order backlog disclosures for the continuing operations. The sale process was completed on the closing date of June 30, 2022.

Earnings position

Even given the challenges of the Russia-Ukraine war, the persistence of the Covid-19 pandemic in 2022, inflation, and supply bottlenecks, Jenoptik is confident that it still has, in large part, a crisis-resistant business model and is in a good financial and balance sheet position.

In the fiscal year 2022, the continuing operations generated revenue of 980.7 million euros, 30.6 percent more than in the prior year (prior year: 750.7 million euros). Organic growth in 2022 amounted to 10.9 percent. The former BG Medical and the SwissOptic Group, both acquired in late 2021, contributed combined revenue of 160.4 million euros.

Over the reporting period, growth came primarily from the Advanced Photonic Solutions division, facilitated by sustained high demand in semiconductor equipment business and good growth in biophotonics, among others. The Smart Mobility Solutions division also made a stronger contribution to revenue.

The quarter with the highest revenue both in the fiscal year 2022 and the prior year was the fourth, with 282.7 million euros (prior year: 231.3 million euros).

More information on the development of revenue in the divisions can be found in the Segment Report

T12 Actual and forecast of business for the Jenoptik Group (in million euros / or as stated)

Indicator	Year-end 2021	2022 forecast		Year-end 2022	Change in %
Revenue	750.7	February: March[3]: August: November:	Further growth Growth of at least 20 percent (incl. BG Medical and SwissOptic) 930 – 960 million euros in the upper half of the existing range of between 930 and 960 million euros	980.7	30.6
Advanced Photonic Solutions	495.6	March[3]:	Growth in the mid-double-digit percentage range	729.6	47.2
Smart Mobility Solutions	110.1	March[3]:	Growth in the mid-single-digit percentage range	114.3	3.8
Non-Photonic Portfolio Companies	141.3	March[3]:	Growth in the low double-digit percentage range	132.3	−6.4
EBITDA / EBITDA margin[1]	125.2 / 16.7 %	March[3]: August:	Marked EBITDA growth / margin approx. 18.0 percent 18.0 and 18.5 percent	184.1 / 18.8 %	18.2
Advanced Photonic Solutions	143.4	March[3]:	Growth in line with revenue	170.0	18.6
Smart Mobility Solutions	19.2	March[3]:	Slightly above prior year	19.3	0.8
Non-Photonic Portfolio Companies	5.4	March[3]:	Growth stronger than revenue	2.7	−49.8
Order intake	936.7	March[3]:	Slightly below prior year	1,185.4	26.6
Cash conversion rate	27.7 %	March[3]:	Between 45 and 55 percent	44.9 %	
Capital expenditure[2]	49.9	March[3]:	Markedly above prior year	106.0	112.2

[1] 2021 excluding one-off effects
[2] Excluding capital expenditure on financial investments
[3] in the Management Report of the 2021 Annual Report

In the fiscal year 2022, Jenoptik saw revenue growth in all regions. Both organic growth and the companies acquired in 2021 contributed to the strong increase in revenue seen in Germany, Europe, and the Americas. Combined revenue for the two regions of the Americas and Asia / Pacific came to 440.3 million euros, or 44.9 percent of total revenue (prior year: 378.6 million euros or 50.4 percent). At 751.7 million euros, the continuing operations generated 76.7 percent of revenue abroad in the past fiscal year (prior year: 611.3 million euros or 81.4 percent).

In 2022, Jenoptik generated its largest share of revenue, of 363.8 million euros or 37.1 percent, with the semiconductor equipment / electronics industry (prior year: 242.1 million euros or 32.2 percent), due to strong demand and as a result of the acquisition. The share of revenue in the automotive and mechanical engineering markets fell to 31.3 percent (prior year: 34.9 percent). Due to acquisitions, but also as a result of organic growth, appreciably higher revenue was generated in the medical technology market in 2022. The share of revenue generated with medical technology rose to 14.2 percent (prior year: 9.5 percent).

In the fiscal year 2022, our top three customers accounted for 25.8 percent of revenue of the continuing operations (prior year: 21.4 percent).

The cost of sales rose 28.6 percent to 635.0 million euros (prior year: 493.8 million euros) and thus at a slightly lower rate than revenue, partly due to product mix effects and economies of scale. This increase was primarily the result of increased material and personnel costs, in part due to price increases but also the 2021 acquisition. This item also includes expenses arising from developments on behalf of customers, totaling 28.0 million euros (prior year: 20.3 million euros), which were offset by corresponding revenues. The increase was mainly the result of customer projects in the Advanced Photonic Solutions division.

Gross profit was sharply up on the prior-year figure of 256.9 million euros and came to 345.7 million euros. Thanks to an improved product mix, the gross margin rose to 35.3 percent (prior year: 34.2 percent).

T13 Revenue by segment (in million euros)

	2022	2021	Change in %
Continuing operations	980.7	750.7	30.6
Advanced Photonic Solutions	729.6	495.6	47.2
Smart Mobility Solutions	114.3	110.1	3.8
Non-Photonic Portfolio Companies	132.3	141.3	−6.4
Other	4.5	3.7	21.0

T14 Revenue by region (in million euros)

	2022	2021	Change in %
Continuing operations	980,7	750.7	30.6
Germany	229,0	139.4	64.3
Europe	275,7	208.4	32.3
Americas	244,1	205.7	18.7
Asia / Pacific	196,2	172.9	13.5
Middle East / Africa	35,7	24.3	46.5

In 2022, research and development expenses amounted to 54.6 million euros (prior year: 38.9 million euros), also reflecting impacts from the above-mentioned acquisition. The share of R+D expenses as a proportion of revenue thus increased to 5.6 percent (prior year: 5.2 percent). At 87.1 million euros, the R+D output, including developments on behalf of customers, was sharply up on the prior-year figure (prior year: 63.6 million euros).

Selling expenses increased 19.9 percent in 2022, to 107.6 million euros (prior year: 89.7 million euros), mainly due to the acquisition of the former BG Medical and the SwissOptic Group, as well as higher amortization in connection with PPA impacts, in particular on customer relationships. At 11.0 percent, the selling expenses ratio was down on the prior-year level (prior year: 11.9 percent).

General administrative expenses increased to 65.5 million euros (prior year: 53.5 million euros), entirely due to the companies acquired in 2021. The administrative expenses ratio fell to 6.7 percent (prior year: 7.1 percent).

Other operating income fell sharply compared to the prior-year period, from 52.9 million euros to 21.5 million euros. In the prior year, this item included a positive one-off effect of 30.5 million euros in connection with the valuation of conditional purchase price components arising from the acquisitions of TRIOPTICS and INTEROB. By contrast, higher currency gains of 12.0 million euros (prior year: 8.6 million euros) had a positive effect.

Other operating expenses rose to 37.7 million euros (prior year: 19.7 million euros). Following a review and reassessment of business prospects, especially those of INTEROB, impairment losses totaling 13.9 million euros for intangible assets, property, plant and equipment, and goodwill were recognized in this item. At 14.0 million euros, currency losses exceeded the prior-year figure of 8.6 million euros and thus also contributed to the increase.

Overall, other operating income and expenses came to minus 16.1 million euros (prior year: 33.3 million euros).

Following strong operating performance in the Advanced Photonic Solutions division, profitability improved significantly in the fiscal year 2022. Earnings before interest, taxes, depreciation, and amortization (incl. impairment losses and reversals) (EBITDA) increased to 184.1 million euros and were thus 18.2 percent up on the prior-year figure of 155.7 million euros. The prior year's EBITDA also included the above-mentioned positive one-off effect worth 30.5 million euros. The EBITDA margin for the continuing operations was 18.8 percent in 2022 (prior year: 20.7 percent, excluding one-off effect: 16.7 percent). In terms of EBITDA, the fourth quarter was also the strongest, with 66.3 million euros (prior year: 46.1 million euros); the EBITDA margin improved to 23.4 percent (prior year: 19.9 percent, excluding one-off effects: 17.8 percent).

More information on research and development can be found in the "Research and Development" chapter

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Detailed information on the composition of other operating income and expenses can be found in point 4.5 and 4.6 of the Notes

T16 Key items in the Statement of Comprehensive Income (in million euros)

	2022	2021	Change in %
Revenue	980.7	750.7	30.6
Cost of sales	635.0	493.8	28.6
R+D expenses	54.6	38.9	40.4
Selling expenses	107.6	89.7	19.9
Administrative expenses	65.5	53.5	22.5
Other operating income	21.5	52.9	−59.4
Other operating expenses	37.7	19.7	91.5

T15 Revenue by target market (in million euros and as % of total revenue of continuing operations)

	2022		2021	
Semiconductors & electronics	363.8	37.1 %	242.1	32.2 %
Automotive & mechanical engineering	307.2	31.3 %	261.7	34.9 %
Medical technology	138.8	14.2 %	71.3	9.5 %
Traffic	130.7	13.3 %	130.3	17.4 %
Other	40.1	4.1 %	45.3	6.0 %
Continuing operations	**980.7**	**100.0 %**	**750.7**	**100.0 %**

EBIT (income from operations) came to 101.9 million euros, 5.8 percent down on the prior-year figure of 108.1 million euros. The main reasons for this were, in addition to the aforementioned positive one-off effect in the prior year, the impairment losses of 13.9 million euros, and higher scheduled depreciation and amortization of 68.3 million euros (prior year: 47.6 million euros), of which impacts arising from the purchase price allocations of minus 26.5 million euros in the reporting year (prior year: minus 14.3 million euros).

Information on the segment EBITDA and EBIT can be found in the Segment Report

In particular due to the substantially higher average tied capital and the slight decline in EBIT, the ROCE (return on capital employed) in the continuing operations fell to 7.9 percent as of December 31, 2022 (prior year: 13.4 percent). The calculation of the ROCE is explained in the Control System chapter and shown in the following table. The calculation of averages uses the twelve month-end balances in the period under review and the opening balance at the start of the year.

Over the reporting period, the financial result decreased to minus 6.0 million euros (prior year: minus 5.6 million euros). The increase in financial expenses was attributable, in particular, to higher interest expenses as a result of the increased debt. By contrast, discount effects on provisions had a positive effect (prior year: compounding of conditional purchase price components). Both currency gains and losses grew compared with the prior year, but in total more or less offset each other. Investment income decreased marginally.

The lower EBIT was also reflected in earnings before tax, which at a total of 96.0 million euros were 6.4 percent down on the prior year (prior year: 102.5 million euros).

The current income taxes of the continuing operations of 20.0 million euros were above the level of the prior year (prior year: 14.0 million euros). Of these, 10.3 million euros (prior year: 8.6 million euros) were attributable to Germany and 9.7 million euros (prior year: 5.4 million euros) to other countries. The increase is primarily due to the rise in earnings abroad.

The cash effective tax rate, the ratio between the current income taxes and earnings before tax, increased to 20.8 percent (prior year: 13.6 percent), due both to higher foreign share of taxable income and non-tax-effective losses abroad, but in view of the domestic earnings and deductible tax loss carryforwards was at a comparatively low level for a German company.

Non-cash deferred taxes came to 12.1 million euros in the past fiscal year (prior year: minus 4.3 million euros). The increase was mainly due to the utilization of tax loss carryforwards in

T17 ROCE for continuing operations (in million euros)

	2022	2021
Non-current non-interest bearing assets	1,060.3	724.7
Current non-interest bearing assets	480.4	347.0
Non-interest bearing borrowings	−255.7	−264.0
Average tied capital	1,284.9	807.7
EBIT	101.9	108.1
ROCE (in percent)	7.9	13.4

T18 EBITDA (in million euros)

	2022	2021	Change in %
Continuing operations	184.1	155.7	18.2
Advanced Photonic Solutions	170.0	143.4	18.6
Smart Mobility Solutions	19.3	19.2	0.8
Non-Photonic Portfolio Companies	2.7	5.4	−49.8
Other	−8.0	−12.2	34.5

T19 EBIT (in million euros)

	2022	2021	Change in %
Continuing operations	101.9	108.1	−5.8
Advanced Photonic Solutions	123.0	116.6	5.5
Smart Mobility Solutions	13.9	14.1	−1.4
Non-Photonic Portfolio Companies	−20.4	−4.5	−349.2
Other	−14.6	−18.0	19.0

Germany. The tax rate thus amounted to 33.5 percent (prior year: 9.4 percent); income taxes totaled 32.1 million euros (prior year: 9.7 million euros).

Discontinued operation

Earnings after tax of the discontinued operation (VINCORION) amounted to minus 6.8 million euros (prior year: 8.5 million euros). In addition to VINCORION's earnings up to the closing date, it also includes earnings from the sale of the discontinued operation (see also point 4.9 in the Notes).

In 2022, Jenoptik generated earnings after tax of 57.0 million euros (prior year: 53.8 million euros, without one-of effect/ 84.3 million euros incl. one-off effect). At 55.1 million euros, earnings attributable to shareholders were consequently down on the prior-year figure of 82.0 million euros (incl. one-off effect). Earnings per share improved to 0.96 euros compared with the prior-year figure of 0.90 euros (excluding one-off effect), but were significantly lower than the figure of 1.43 euros per share (including one-off effect). The continuing operations achieved earnings per share of 1.05 euros in 2021 excluding the one-off effect (1.58 euros including the one-off effect) and 1.08 euros in 2022.

See point 4.8 in the Notes for detailed information on the subject of taxes

Order position

Strong demand in the first nine months continued into the fourth quarter. In 2022, the order intake for the continuing operations increased by a significant 26.6 percent over the reporting year to 1,185.4 million euros (prior year: 936.7 million euros), both organically and through the new orders of the companies acquired in 2021. The order intake thus exceeded the one-billion-euro mark for the first time. The former BG Medical and the SwissOptic Group contributed 211.9 million euros to this figure. In the Advanced Photonic Solutions division, most new orders were posted in the semiconductor equipment, biophotonics, and industrial solutions areas. The Smart Mobility Solutions division also improved its

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T20 Order intake (in million euros)

	2022	2021	Change in %
Continuing operations	1,185.4	936.7	26.6
Advanced Photonic Solutions	891.8	674.9	32.1
Smart Mobility Solutions	125.8	116.5	7.9
Non-Photonic Portfolio Companies	163.4	141.6	15.4
Other	4.5	3.7	21.0

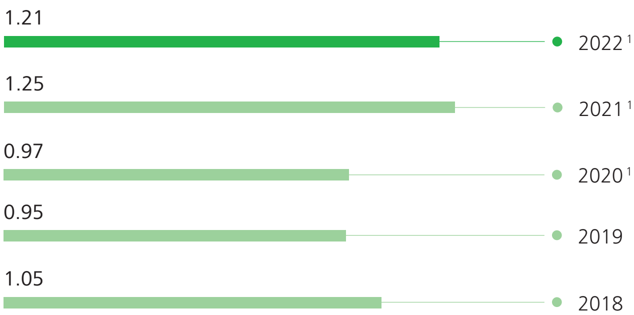
T21 Order backlog (in million euros)

	2022	2021	Change in %
Continuing operations	733.7	543.5	35.0
Advanced Photonic Solutions	581.4	430.2	35.1
Smart Mobility Solutions	65.7	54.3	21.0
Non-Photonic Portfolio Companies	86.6	58.9	46.9

T22 Book-to-bill ratio

	2022	2021
Continuing operations	1.21	1.25
Advanced Photonic Solutions	1.22	1.36
Smart Mobility Solutions	1.10	1.06
Non-Photonic Portfolio Companies	1.24	1.00
Other	1.00	1.00

G09 Development of the book-to-bill ratio



[1] Figures for continuing operations

order intake compared to the prior-year period. Here the order intake is strongly influenced by projects and thus subject to significant fluctuations. The order intake of the Non-Photonic Portfolio Companies also improved on the prior-year period.

See the Segment Report for detailed information on the order intake in the divisions

The book-to-bill ratio for the continuing operations was 1.21 (prior year: 1.25). Both the two divisions and the Non-Photonic Portfolio Companies had a book-to-bill ratio of more than 1 in the reporting period.

See point 8.2 of the Notes for more information on factoring

The order backlog of the continuing operations increased to 733.7 million euros at the end of 2022 (31/12/2021: 543.5 million euros). Of this order backlog, 83.4 percent (prior year: 85.9 percent) will be converted to revenue in 2023.

Financial Position

The war in Ukraine, the impact of the Covid-19 pandemic, inflation, and supply bottlenecks continued to represent significant uncertainty factors in the fiscal year 2022, and were reflected in the financial management of the Jenoptik Group. In the assessment of the Executive Board, the Group continues to ensure healthy balance sheet ratios and an ample supply of liquidity, and is thus in a good financial position.

Financial management principles

The central Treasury department plans the need of and controls the provision of liquid resources within the Group. The Group's financial flexibility and solvency is guaranteed at all times on the basis of multi-year financial planning and quarterly forecasts. A cash pooling system also ensures the liquidity supply to all the major companies in Europe and North America. Companies not integrated in the cash pooling system are usually supplied with liquidity through internal group loans or, in exceptional cases, credit lines from local banks.

Jenoptik utilizes a program to sell trade receivables (factoring). The volume of this instrument was increased from 25 to 50 million euros in 2022; approx. 25 million euros were actually used.

See point 5.7 of the Notes for more information on liquidity

Primarily using currency forward transactions, Jenoptik hedges orders and internal loan receivables in foreign currencies, thereby reducing the impacts of exchange rate fluctuations on earnings and cash flow. Derivative financial instruments are used exclusively to hedge the operational business as well as financial transactions required for operational purposes.

As a result of the above measures, the existing financing instruments – essentially the syndicated loan and debenture bonds –, and the available cash and cash equivalents, the liquidity of all group companies in the past fiscal year was sufficiently secured at all times.

Capital structure and financing analysis

With an equity ratio of 50.4 percent as of December 31, 2022, net debt of 479.0 million euros, and leverage (net debt in relation to EBITDA) of 2.6, the Executive Board believes that the Group enjoys a solid and viable financing structure, as well as healthy balance sheet ratios. This gives Jenoptik the flexibility and financial latitude to finance future organic growth and potential acquisitions in the process of implementing its "Agenda 2025".

In March 2021, Jenoptik placed sustainability-linked debenture bonds worth 400 million euros on the capital market on attractive terms. The debenture bonds comprised several tranches with terms of five, seven, and ten years, which were issued not only in euros but also, to a lesser extent, in US dollars (59 million US dollars). Investors from Germany and abroad were offered both fixed and variable interest rate options.

In December 2021, Jenoptik also refinanced a revolving syndicated loan and increased it from 230 to over 400 million euros. The term of the loan provided by seven banks was originally five years and was extended by a further year in 2022. If approved by the lenders, the term can be extended by a further year and the volume increased to 600 million euros if required. This financing instrument, too, for the first time included sustainability components. Further information can be found in the Notes (8.2. Financial instruments).

In addition to cash and cash equivalents of 56.8 million euros and current financial investments of 1.0 million euros, the Group also had unused credit lines totaling 380 million euros to fall back on at the end of 2022. This means that, at the end of 2022, Jenoptik had over 430 million euros available for corporate development projects.

The following information on the financial position for the fiscal year 2022 relates to the continuing operations in the Jenoptik Group.

In 2022, non-current financial debt increased significantly to 477.7 million euros (31/12/2021: 448.7 million euros). This item included financial debt to banks in the amount of

435.4 million euros (31/12/2021: 421.2 million euros) and lease liabilities of 42.4 million euros (31/12/2021: 27.5 million euros). At the end of 2022, non-current financial debt accounted for around 89 percent of Jenoptik's financial debt (31/12/2021: 75 percent).

In part due to repayment of the final tranche of the debenture bonds issued in 2015, current financial debt fell sharply to 59.1 million euros (31/12/2021: 149.0 million euros).

The debt-to-equity ratio was 0.98 at the end of 2022 (31/12/2021: 1.25), The debt-to-equity ratio is defined as the ratio between borrowings (828.5 million euros) and equity (843.3 million euros).

The net cash position is defined as the total cash, cash equivalents, and current financial investments minus current financial debt. At the end of 2022, it improved to a figure of minus 1.2 million euros (31/12/2021: minus 92.6 million euros), mainly due to a reduction of current financial debt. Cash and cash equivalents, including current financial investments, were virtually unchanged at 57.8 million euros (31/12/2021: 56.4 million euros).

Over the reporting period, the reduction in financial debt also resulted in net debt falling to 479.0 million euros as of December 31, 2022 (31/12/2021: 541.4 million euros).

Analysis of capital expenditure

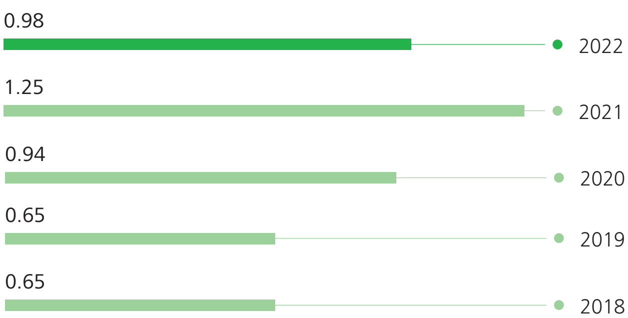
The focus of capital expenditure is derived from the group strategy and is in line with the planned growth targets and the asset structure of the Group. To ensure this, the individual investments are systematically reviewed with respect to sustainability or their value contribution on the basis of performance and financial indicators, and all risks and opportunities are thoroughly analyzed.

In 2022, Jenoptik invested 106.0 million euros in intangible assets and property, plant, and equipment (prior year: 49.9 million euros). Capital expenditure was primarily made to create the conditions for growth and new customer orders.

At 95.5 million euros, the largest share of capital expenditure was once again on property, plant, and equipment (prior year: 39.9 million euros). These funds were used to expand manufacturing capacity and acquire new technical equipment, in particular for the semiconductor equipment industry, for construction of the factory in Dresden, the new site for the former BG Medical in Berlin, and the employee restaurant in Jena.

Capital expenditure for intangible assets remained largely stable at 10.5 million euros (prior year: 10.1 million euros). Investment was mainly attributable to costs in connection with the new IT system (SAP S/4 HANA) and the development costs from internal projects to be capitalized, which in the reporting period amounted to 4.2 million euros (prior year: 4.2 million euros).

G10 Debt-to-equity ratio [1]



[1] Values for the years 2018 through 2020 are data for the Group including VINCORION

T23 Net and gross debt (in million euros) [1]

	2022	2021	2020	2019	2018
Non-current financial debt	477.7	448.7	138.4	122.6	111.4
Current financial debt	59.1	149.0	130.9	37.0	10.1
Gross debt	**536.8**	**597.7**	**269.3**	**159.6**	**121.5**
minus current financial investments	1.0	1.6	4.9	69.7	59.5
minus cash and cash equivalents	56.8	54.8	63.4	99.0	89.3
Net debt	**479.0**	**541.4**	**201.0**	**−9.1**	**−27.2**

[1] Values for the years 2018 through 2020 are data for the Group including VINCORION

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More information on capital expenditure in the divisions can be found in the Segment Report; on future investment projects in the Forecast Report

Scheduled depreciation and amortization of the continuing operations increased to 68.3 million euros (prior year: 47.6 million euros), in particular due to the acquisitions in the fiscal year 2021, including PPA impacts.

Scheduled depreciation on property, plant, and equipment came to 37.2 million euros (prior year: 28.8 million euros) and was thus significantly below the figure for capital expenditure on property, plant, and equipment.

Scheduled amortization on intangible assets amounted to 30.9 million euros (prior year: 18.7 million euros), and, as in the prior year, primarily included amortization of software, as well as intangible assets identified in the course of company acquisitions.

Analysis of cash flows

The Group's cash flows from operating activities improved significantly to 142.7 million euros in the reporting year (prior year. 98.0 million euros). This increase is due mainly to a considerable improvement in cash-effective income and lower negative impacts arising from the increase in working capital.

In 2022, the Group's cash flows from investing activities amounted to minus 13.4 million euros (prior year: minus 413.6 million euros), Over the reporting period, this item was particularly influenced by significantly higher capital expenditure for property, plant, and equipment and liquidity flows in connection with the sale of VINCORION. In the prior year, it was mainly influenced by the payments for the acquisition of BG Medical and the SwissOptic Group, as well as the remaining 25 percent (second purchase price tranche) for TRIOPTICS.

Due to higher cash flows from operating activities before taxes, the free cash flow of the continuing operations of 82.7 million euros was significantly up on the prior-year figure of 43.2 million euros, despite the increase in expenditure from investing

T24 Capital expenditure and depreciation / amortization in continuing operations (in million euros)

	2022	2021	Change in %
Capital expenditure	106.0	49.9	112.2
Intangible assets	10.5	10.1	3.9
Property, plant, and equipment	95.5	39.9	139.6
Depreciation/amortization/impairment losses and reversals	82.2	47.6	72.7
Intangible assets	44.2	18.7	136.6
Property, plant, and equipment	37.8	28.4	33.4
Investment properties	0.1	0.5	−75.7

T25 Capital expenditure by segment – intangible assets and property, plant and equipment as well as investment properties (in million euros)

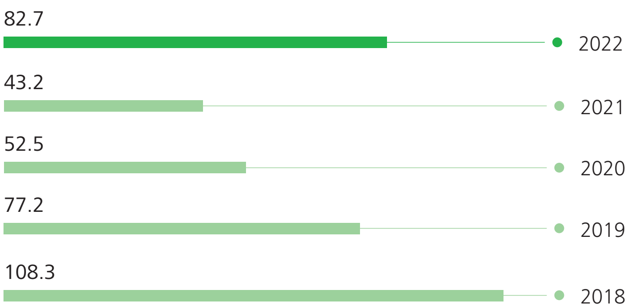
	2022	2021	Change in %
Continuing operations	106.0	49.9	112.2
Advanced Photonic Solutions	79.6	30.7	159.6
Smart Mobility Solutions	7.8	8.1	−3.4
Non-Photonic Portfolio Companies	3.8	1.7	130.0
Other	14.8	9.5	55.3

activities. At group level, it amounted to 79.6 million euros (prior year: 62.8 million euros). The free cash flow is calculated as the group cash flows from operating activities before taxes in the amount of 157.5 million euros (prior year: 108.3 million euros) and cash flows from operating investing activities, i.e., the balance of receipts and payments of funds for intangible assets and property, plant, and equipment, amounting to minus 77.9 million euros (prior year: minus 45.5 million euros).

In the fiscal year 2022, the cash conversion rate of the continuing operations came to 44.9 percent (prior year: 27.7 percent).

The Group's cash flows from financing activities amounted to minus 127.3 million euros in the period covered by the report (prior year: 304.2 million euros), and were particularly influenced by proceeds from the take-up of loans (in the prior year, the issue of debenture bonds) and repayment of the remaining tranche of the debenture bond placed in 2015. Dividends of 17.6 million euros were also paid out to shareholders of the parent company and minority shareholders in 2022 (prior year: 16.1 million euros), of which 14.3 million euros were paid to JENOPTIK AG shareholders and 3.3 million euros to TRIOPTICS minority shareholders.

G11 Free cash flow (in million euros) [1]



[1] Values for the years 2018 through 2019 are data for the Group including VINCORION

Asset Position

In the fiscal year 2022, the completion of the sale of VINCORION led to changes in the Consolidated Statement of Financial Position. At the end of 2021, assets and liabilities were shown as separate items in respect of assets and liabilities – "assets held for sale" and "liabilities related to assets held for sale".

Compared with the end of 2021, the Jenoptik Group's total assets as of December 31, 2022 were down by 85.3 million euros to 1,671.8 million euros (31/12/2021: 1,757.0 million euros), primarily due to the above-mentioned sale.

On the assets side, non-current assets increased to 1,128.5 million euros (31/12/2021: 1,110.8 million euros), particularly due to the rise in property, plant, and equipment following the investments made. Other non-current financial assets also increased due to derivatives. By contrast, intangible assets fell in value from 753.2 million euros to 730.6 million euros, mainly due to amortization and impairment losses on intangible assets, as well as deferred taxes mainly due to JENOPTIK AG's utilization of the tax loss carryforward.

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T26 Group cash flow (incl. VINCORION) (in million euros)

	2022	2021	2020	2019	2018
Cash flows from operating activities	142.7	98.0	89.7	108.9	135.5
Cash flow from investing activities	−13.4	−413.6	−188.4	−54.4	−117.5
Cash flow from financing activities	−127.3	304.2	63.7	−46.1	−60.9
Cash-effective change in cash and cash equivalents	2.0	−11.4	−35.0	8.4	−42.9
Non-cash-effective change in cash and cash equivalents	−0.1	2.8	−0.6	1.4	−0.1
Change in cash and cash equivalents	**1.9**	**−8.6**	**−35.6**	**9.8**	**−43.1**
Cash and cash equivalents at end of fiscal year	**56.8**	**54.8**	**63.4**	**99.0**	**89.3**

More information on the intangible assets and property, plant, and equipment can be found in points 5.1 and 5.2 of the Notes

Property, plant, and equipment increased from 266.7 million euros at the end of 2021 to 324.6 million euros as of December 31, 2022. This was in part due to the increase in technical equipment and machinery, advances paid, assets under construction, and the buildings item.

Over the past fiscal year, current assets fell to 543.3 million euros (31/12/2021: 646.3 million euros). This was primarily due to the completion of the VINCORION sale process and the associated disposal of the assets held for sale (31/12/2021: 156.8 million euros). Lower contract assets of 58.1 million euros (31/12/2021: 81.4 million euros) also contributed to the decline; here, a significant decrease was posted in particular in the Non-Photonic Portfolio Companies due to the completion of a major project. It was offset by the increase in inventories, trade receivables, and other current non-financial assets. Inventories increased to 265.0 million euros (31/12/2021: 200.2 million euros), as services and supplies were made in advance for future revenue, critical stocks were built up, and the availability of primary products was secured. The increase in trade receivables was mainly due to revenue growth, particularly in the fourth quarter. At 56.8 million euros, cash and cash equivalents remained largely unchanged (31/12/2021: 54.8 million euros).

The working capital of the continuing operations rose to 287.4 million euros as of December 31, 2022 (31/12/2021: 260.6 million euros). On the assets side, inventories and trade receivables increased considerably more strongly than trade accounts payable and contract liabilities on the liabilities side. The working capital ratio, that of working capital to revenue based on the last twelve months, improved to 29.3 percent at the end of 2022 (31/12/2021: 34.7 percent) as a result of the increase in revenue.

As of December 31, 2022, equity of 843.3 million euros was sharply up on the figure at year-end 2021 (31/12/2021: 780.7 million euros), with net profit for the period, currency effects, and actuarial effects all having a particularly positive impact. By contrast, the dividend for the shareholders of JENOPTIK AG and the minority shareholders of TRIOPTICS, a total of 17.6 million euros, had an equity-reducing effect. The equity ratio, that of equity to total assets, improved significantly to 50.4 percent (31/12/2021: 44.4 percent).

Non-current liabilities increased to 519.0 million euros (31/12/2021: 503.1 million euros), in 2022 mainly influenced by the rise in non-current financial debt to 477.7 million euros as a result of borrowings and new lease agreements (31/12/2021: 448.7 million euros). Pension provisions reduced due to a rise in interest rates (see the Notes, chapter “Provisions for pension obligations,” point 5.12).

Current liabilities fell to 309.5 million euros (31/12/2021: 473.3 million euros), in particular due to the disposal of liabilities in connection with assets held for sale following completion of the sale of VINCORION (31/12/2021: 93.6 million euros). In addition, the last tranche of the debenture bonds issued in 2015 was repaid, producing a reduction of current financial debt to 59.1 million euros (31/12/2021: 149.0 million euros). Other current financial liabilities also fell from 22.0 million euros at the end of 2021 to 10.3 million euros at the end of 2022. As of the reporting date, current trade payables grew to

T27 Components of working capital (in million euros)

	2022	2021	Change in %
Inventories	256.0	200.2	27.8
Trade receivables	138.8	120.5	15.2
Contract assets	58.1	81.4	−28.6
Trade accounts payable	100.6	94.2	6.8
Contract liabilities	64.9	47.3	37.0
Total	**287.4**	**260.6**	**10.3**

100.6 million euros (31/12/2021: 94.2 million euros). The increase in advances received for projects with revenue recognition at a point in time, in particular, resulted in higher contract liabilities of 64.9 million euros (31/12/2021: 47.3 million euros).

Acquisitions and disposals

The acquisitions and disposals made in the fiscal year 2022 are set out in the Group Structure chapter. There were no other purchases or sales of companies in 2022.

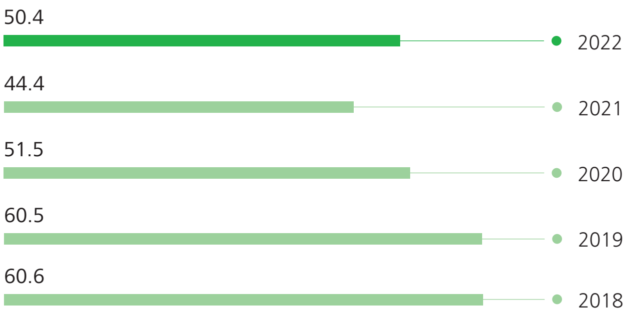
Assets and obligations not recognized in the statement of financial position

The value of the Jenoptik brand is one of the main assets we do not include in the balance sheet. Jenoptik operates in the highly fragmented photonics market, which is characterized by a multitude of highly-specialized companies. We aim to further boost awareness of our brand, especially on the international stage, in the coming years. Since early 2019, Jenoptik has been on the market with new brand positioning and a new corporate design. Strategically, Jenoptik is positioning itself as a photonics specialist.

Non-capitalized tax loss carryforwards. Tax loss carryforwards arise from losses in the past that have not yet been offset against taxable profits. They represent potential future cash flow benefits, since actual tax payments can be reduced by these losses being offset against taxable profits.

For more information on the acquisition and sales of entities, see point 2.4 of the Notes

G12 Equity ratio (in percent)



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T28 Financial debt by due date (in million euros)

	Up to 1 year		1 to 5 years		More than 5 years		Total through 31/12	
	2022	2021	2022	2021	2022	2021	2022	2021
Liabilities to banks	47.1	137.6	203.1	201.9	232.3	219.3	482.5	558.8
Liabilities from leases	11.9	11.4	27.8	25.4	14.6	2.2	54.3	38.9
Total	**59.1**	**149.0**	**230.9**	**227.3**	**246.8**	**221.5**	**536.8**	**597.7**

T29 Components of financial debt (in million euros)

	2022	2021	Change in %
Current	59.1	149.0	−60.4
Liabilities to banks	47.1	137.6	−65.7
Lease liabilities	11.9	11.4	4.4
Non-current	477.7	448.7	6.5
Liabilities to banks	435.4	421.2	3.4
Lease liabilities	42.4	27.5	53.9

For non-usable tax loss carryforwards, deferred tax assets are not recognized for corporation tax purposes in the amount of 27.6 million euros (prior year: 25.5 million euros) and trade tax purposes in the amount of 1.2 million euros (prior year: 11.8 million euros), as they are unlikely to be used within a determined planning time frame. Equally, no deferred tax assets were recognized for deductible timing differences in the amount of 3.0 million euros (prior year: 2.0 million euros).

Off-balance sheet financing instruments for the financial and asset position. Jenoptik uses a factoring program as an additional instrument to manage its liquidity and working capital. This involves the sale of trade receivables from selected customers to a factoring company and allows Jenoptik to convert some long-term receivables into liquidity at short notice. The volume of this instrument was increased from 25 to 50 million euros in 2022; approx. 25 million euros were actually used. Since the economic opportunities and risks associated with the receivables are transferred to the buyer when the receivables are sold, those receivables are no longer recognized on Jenoptik's statement of financial position ("real factoring"). Jenoptik does not use any other significant off-balance sheet financing instruments.

Information on guarantees, other commitments, and contingent liabilities can be found in point 8.3 of the Notes.

Clauses in contracts concluded by JENOPTIK AG, which apply in the event of a change of control within the ownership structure of JENOPTIK AG following a takeover bid, exist for financing agreements with a total utilized volume of approximately 456.8 million euros (prior year: 549.6 million euros). More information can be found in the Information on Takeover Law chapter.

General Statement by the Executive Board on the Development of Business

Jenoptik reported good performance in terms of order intake, revenue, and earnings (on a comparable basis) in the fiscal year 2022. Overall, the war in Ukraine, Covid-19, and issues such as inflation and supply bottlenecks did not have any significant negative impact on the operating activities of the Jenoptik businesses in the reporting year and therefore on the Group's earnings, financial, and asset position. Jenoptik was able to raise its guidance during the year and in the fiscal year 2022 generated revenue and EBITDA margin figures that were slightly above the ranges forecast. Despite the challenging environment and the higher debt compared with prior years as a result of the acquisitions, the Executive Board also believes that the Group continued to ensure healthy balance sheet ratios.

The continuing operations generated appreciable revenue growth in 2022, sustained by strong ongoing demand in semiconductor equipment business, good developments in the biophotonics market, and in the Industrial Solutions area in the Advanced Photonic Solutions division. Revenue in the Smart Mobility Solutions division was also up on the prior year, while it was down in the Non-Photonic Portfolio Companies.

In the fiscal year 2022, the continuing operations also increased their EBITDA. On a comparable basis, i.e., excluding the one-off effect in connection with the revaluation of purchase price components in connection with the acquisitions of TRIOPTICS and INTEROB in the fiscal year 2021, profitability also improved appreciably in the past fiscal year.

All three segments saw considerable order intake growth in 2022. The Group's order backlog at the end of 2022 was also up on the good level of the prior year and thus represents, in the opinion of the Executive Board, a solid basis for further profitable growth.

Thanks to higher cash flows from operating activities, the free cash flow of the continuing operations was up on the prior-year figure, which allowed for an appreciable reduction in net debt over the course of the year. In the opinion of the Executive Board, Jenoptik thus continues to have the financial latitude required for investments in the core photonics business and possible further acquisitions. This has created a good basis for further growth.

In the view of the Executive Board, the balance sheet and financing structure is sound. The equity ratio rose to 50.4 percent at the end of the year.

In view of the ongoing challenging environment in 2022, the Executive Board was very satisfied overall with the company's performance.

Segment Report

The two divisions, Advanced Photonic Solutions and Smart Mobility Solutions, together with the Non-Photonic Portfolio Companies, represent the segments as defined in IFRS 8. Prior-year information in the Segment Report has been adjusted to the new structure of the Jenoptik Group.

For information on group structure see "Group Structure" chapter

The divisions' product portfolio and competitive positioning are set out in greater detail in the Group Business Model chapter.

The revenue, order intake, and order backlog figures provided in the Segment Report concern business with external parties only.

Information on the various markets can be found in the Sector Report, on future developments in the Forecast Report

Advanced Photonic Solutions

On the closing date of November 30, 2021, Jenoptik successfully completed the acquisition of the former BG Medical and the SwissOptic Group, and integrated them into the Advanced Photonic Solutions division. BG Medical was merged into Jenoptik Optical Systems GmbH in 2022. The companies were not included in the financial statements for 2021 until the closing date and are therefore only included for one month in the prior year's figures such as revenue, earnings, and order intake. The acquired companies' contributions to revenue, order intake, and order backlog are disclosed in the text below.

The Advanced Photonic Solutions division acts as a partner to support its customers with a broad photonics technology portfolio covering everything from development to volume production. Cooperation as a development and production partner with numerous international companies was again an important part of the business in the reporting year 2022.

Advanced Photonic Solutions generated revenue of 729.6 million euros in 2022 (prior year: 495.6 million euros). The fourth quarter was the strongest, with 200.5 million euros in revenue (prior year: 146.0 million euros). Business with the semiconductor equipment industry saw particular growth in 2022, but the Biophotonics, Industrial Solutions, and Optical Test & Measurement areas also contributed to the good business performance. Combined revenue of the former BG Medical and the SwissOptic Group came to a total of 160.4 million euros (prior year: 9.6 million euros). The division thus grew organically by 17.4 percent in the reporting period. The Advanced Photonic Solutions division's share of Jenoptik's revenue rose to 74.4 percent (prior year. 66.0 percent).

In total, around 77.2 percent of the division's revenue was generated abroad in 2022 (prior year: 85.6 percent). Revenue increased in all regions. Due in part to the acquired companies' contributions, revenue in Europe (including Germany) increased to 396.8 million euros (prior year: 227.4 million euros) and continued to account for the largest share, followed by Asia/Pacific, where revenue saw a rise from 141.6 million euros to 165.8 million euros, particularly due to the contribution from the SwissOptic Group, which was included for the first time.

More information on revenue in the regions can be found in the Segment Report in the Notes

T30 Advanced Photonic Solutions at a glance (in million euros)

	2022	2021	Change in %
Revenue	729.6	495.6	47.2
EBITDA	170.0	143.4	18.6
EBITDA margin in % [1]	23.3	28.6	
EBIT	123.0	116.6	5.5
EBIT margin in % [1]	16.8	23.2	
Capital expenditure	79.6	30.7	159.6
Free cash flow	100.1	79.0	26.7
Cash conversion rate in %	58.9	55.1	
Order intake	891.8	674.9	32.1
Order backlog	581.4	430.2	35.1
Employees	2,995	2,721	10.1

[1] Based on total external and internal revenue

At 170.0 million euros (including negative PPA impacts of 1.2 million euros), earnings before interest, taxes, depreciation, and amortization (EBITDA) were appreciably up on the prior-year figure of 143.4 million euros (including PPA impact of 2.1 million euros). Very good performance in the areas of Semiconductor Equipment and Biophotonics was chiefly responsible for this growth. The prior-year earnings had included a positive one-off effect worth 30.5 million euros in connection with the conditional purchase price components arising from the acquisitions of TRIOPTICS and INTEROB. The EBITDA margin came to 23.3 percent in the reporting period, above the comparable prior-year figure, excluding one-off effect, of 22.8 percent but down on the prior year's 28.6 percent (including one-off effect).

Compared to the prior year, which had included the above-mentioned one-off effect, the division's EBIT improved to 123.0 million euros (prior year: 86.1 million euros (without one-off effect)/116.6 million euros (incl. one-off effect). The EBIT included PPA impacts arising from the 2020 and 2021 acquisitions of minus 22.6 million euros (prior year: minus 10.8 million euros). The EBIT margin was 16.8 percent (prior year: 17.4 percent excluding one-off effect/23.2 percent including one-off effect).

Demand for products made by the division remained at a consistently high level in 2022. At 891.8 million euros, the order intake exceeded the prior-year figure of 674.9 million euros by 32.1 percent. The division posted its strongest contribution in the fourth quarter, with orders worth 221.3 million euros (prior year: 207.7 million euros). This includes the first tranche of a frame contract with a total volume in the high double-digit million euro range and a term of three years, which was concluded with a global technology group at the end of 2022.

Order intake growth was particularly seen from the semiconductor equipment industry and in the Biophotonics and Industrial Solutions areas, with new orders from BG Medical and the SwissOptic Group worth 211.9 million euros (prior year: 9.9 million euros) also contributing to this increase. Set against revenue, this resulted in a book-to-bill ratio of 1.22 for the reporting period (prior year: 1.36).

Due to the higher order intake, the division's order backlog rose by 151.1 million euros, to 581.4 million euros, at the end of 2022 (31/12/2021: 430.2 million euros). Of this figure, the former BG Medical and the SwissOptic Group posted an order backlog worth 115.0 million euros (prior year: 62.7 million euros).

In the light of very good business performance, the free cash flow before interest and income taxes increased to 100.1 million euros (prior year: 79.0 million euros), despite the significant increase in capital expenditure. The cash conversion rate consequently rose from 55.1 percent in the prior-year period to 58.9 percent at year-end 2022. The division continued to utilize factoring as a financing instrument in 2022.

By contrast, a strong increase was seen in the working capital, in part due to the significant build-up of inventories, from 179.1 million euros at the end of 2021 to 204.2 million euros as of December 31, 2022.

As of December 31, 2022, Advanced Photonic Solutions had a total of 2,995 employees, 274 more than in the prior year (prior year: 2,721), with the greatest rise seen in the Semiconductor Equipment area. At the end of 2022, the division had 115 trainees (prior year: 111).

Including development services on behalf of customers, the division's R+D output came to 63.1 million euros, sharply up on the prior-year figure of 41.9 million euros. R+D expenses in the past fiscal year totaled 34.8 million euros (prior year: 20.2 million euros). The share of total R+D costs in division revenue was 8.6 percent (prior year: 8.5 percent).

Capital expenditure on intangible assets and property, plant, and equipment rose strongly, by 159.6 percent to 79.6 million euros (prior year: 30.7 million euros). To meet growing customer requirements, the division is investing in machinery and equipment, as well as in a new development and production site in Berlin. As a result of rising demand for optics and sensors for the semiconductor industry, Jenoptik is also expanding its manufacturing capacities and will invest over 70 million euros in a state-of-the-art production building for micro-optics and sensors and a new office complex in Dresden. Groundbreaking took place in September 2022, with production at the new factory due to begin in early 2025.

Capital expenditure was offset by scheduled depreciation/amortization in the sum of 47.0 million euros (prior year: 26.8 million euros), up due to PPA impacts in connection with the acquisitions made in recent years and higher depreciation/amortization on intangible assets and property, plant, and equipment.

For more information on the key development topics, see the "Research and Development" chapter

Smart Mobility Solutions

The Smart Mobility Solutions division is responsible for the Group's business with systems and services related to traffic safety, such as speed and red light monitoring systems and custom solutions for identifying other traffic violations, and for the fields of public safety and road user charging. The business is predominantly project-based.

In 2022, the division generated revenue of 114.3 million euros (prior year: 110.1 million euros), 3.8 percent more than in the prior year. After a slow start to the year due to supply bottlenecks, the division was able to increase its revenue from quarter to quarter over the course of the year and posted its highest revenue of 38.5 million euros in the fourth quarter (prior year: 37.8 million euros). Smart Mobility Solution's share of revenue in the past fiscal year came to 11.7 percent (prior year: 14.7 percent).

At around 67.3 percent, the share of revenue generated abroad in 2022, reflecting project volumes, was down on the prior-year figure of 72.0 percent. The division saw growth in Europe, including Germany, and in the Middle East/Africa region. By contrast, revenue in the Americas declined.

For information on the key development topics, see the "Research and Development" chapter

At 19.3 million euros, EBITDA was marginally down on the prior-year figure of 19.2 million euros. A considerable contribution to earnings of 10.9 million euros (prior year: 10.6 million euros) was generated in the fourth quarter. As revenue increased at a stronger rate than EBITDA, the EBITDA margin of 16.9 percent in 2022 was slightly down on the prior year's 17.4 percent. In the fourth quarter, the division achieved an EBITDA margin of 28.3 percent, a little above the prior-year figure of 28.0 percent.

The division's order intake is subject to typical fluctuations in project business. In 2022, Smart Mobility Solutions received new orders worth a total of 125.8 million euros, more than in the prior year (prior year: 116.5 million euros).

Over the period covered by the report, the division secured larger orders in North America, Europe, South America, and the Middle East/Africa region. The book-to-bill ratio increased to 1.10 (prior year: 1.06).

Due to the higher order intake, the order backlog grew strongly, to 65.7 million euros as of December 31, 2022 (31/12/2021: 54.3 million euros).

With a total of 485 employees, the number of people employed in the division at the end of 2022 was virtually unchanged (31/12/2021: 491 employees). At the end of December, the division had 9 trainees, the same as in the prior year.

In 2022, the division's R+D expenses of 15.5 million euros were up on the prior-year figure of 14.4 million euros. Overall, the division's R+D output increased to 17.6 million euros (prior year. 15.0 million euros).

T31 Smart Mobility Solutions at a glance (in million euros)

	2022	2021	Change in %
Revenue	114.3	110.1	3.8
EBITDA	19.3	19.2	0.8
EBITDA margin in % [1]	16.9	17.4	
EBIT	13.9	14.1	−1.4
EBIT margin in % [1]	12.1	12.8	
Capital expenditure	7.8	8.1	−3.4
Free cash flow	4.2	−4.4	n. a.
Cash conversion rate in %	22.0	<0	
Order intake	125.8	116.5	7.9
Order backlog	65.7	54.3	21.0
Employees	485	491	−1.2

[1] Based on total external and internal revenue

In the year covered by the report, the division invested 7.8 million euros in intangible assets and property, plant, and equipment (prior year: 8.1 million euros), primarily in connection with traffic service provision (TSP) projects, especially in North America and Europe. The traffic safety technology used for these projects is installed and operated by Jenoptik on behalf of the customer. As a result, in 2022 the level of capital expenditure was 3.4 percent lower than in the prior year. Capital expenditure was offset by scheduled depreciation/amortization totaling 5.5 million euros (prior year: 5.1 million euros).

As of December 31, 2022, the working capital came to 34.1 million euros, up on the prior-year figure of 25.6 million euros, primarily the result of increases in inventories due to disrupted supply chains and trade receivables.

More minor negative impacts arising from the increase in working capital, in particular, resulted in a higher free cash flow (before interest and income taxes) of 4.2 million euros in the fiscal year (prior year: minus 4.4 million euros). As a result, the cash conversion rate was also significantly up on the prior-year figure (prior year: <0).

Non-Photonic Portfolio Companies

The Non-Photonic Portfolio Companies particularly focus on solutions for the automotive industry in the Metrology and Automation & Integration business areas.

Their business continued to feel the impacts of the coronavirus pandemic, supply bottlenecks, and structural issues in 2022.

Revenue of the Non-Photonic Portfolio Companies came to 132.3 million euros in 2022 (prior year: 141.3 million euros), with growth seen in the Automation & Integration field in North America. The prior-year period had still included the revenue contributions from the non-optical process metrology business for grinding machines, sold as of July 30, 2021. The reporting year's highest quarterly revenue of 41.2 million euros (prior year: 45.3 million euros) was achieved in the fourth quarter. The Non-Photonic Portofolio Conmpanies' share of the continuing operations' revenue fell to 13.5 percent in 2022 (prior year: 18.8 percent).

At around 84.1 percent, the division again generated most of its revenue abroad in 2022 (prior year: 76.2 percent). While revenue in the Americas, in particular the US, was sharply up on the prior-year figure (rise from 69.2 to 79.4 million euros), it was down in Europe, including Germany, and in the Asia/Pacific region.

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T32 Non-Photonic Portfolio Companies at a glance (in million euros)

	2022	2021	Change in %
Revenue	132.3	141.3	−6.4
EBITDA	2.7	5.4	−49.8
EBITDA margin in % [1]	2.0	3.8	
EBIT	−20.4	−4.5	−349.2
EBIT margin in % [1]	−15.3	−3.2	
Capital expenditure	3.8	1.7	130.0
Free cash flow	14.0	−13.5	n.a.
Cash conversion rate in %	520.8	<0	
Order intake	163.4	141.6	15.4
Order backlog	86.6	58.9	46.9
Employees	657	692	−5.1

[1] Based on total external and internal revenue

EBITDA fell 49.8 percent to 2.7 million euros (prior year: 5.4 million euros), in part strongly impacted by projects in the Automation area. The prior year had also included income of 3.5 million euros from the above-mentioned sale of the metrology business for grinding machines, as well as impacts arising from the reversal of provisions, in particular in connection with the restructuring and cost-cutting measures put in place in 2020. The EBITDA margin fell to 2.0 percent, compared with 3.8 percent in the prior year. With EBITDA of 5.5 million euros, a margin of 13.2 percent was achieved in the fourth quarter (prior year: 1.0 million euros or 2.1 percent).

EBIT in the Non-Photonic Portfolio Companies decreased to minus 20.4 million euros (prior year: minus 4.5 million euros), and included impacts arising from the purchase price allocation (scheduled depreciation / amortization) for the acquisitions of INTEROB, Prodomax, and Five Lakes Automation amounting to minus 4.9 million euros (prior year: minus 5.2 million euros). In addition, following a review and reassessment of the business prospects of INTEROB in particular, impairment losses of 4.7 million euros were recognized on intangible assets and property, plant, and equipment. Due to the associated reduction in the division's expected future cash flows, coupled with increased capital costs, an impairment loss of 9.2 million euros was also recognized on goodwill. The EBIT margin fell to minus 15.3 percent (prior year: minus 3.2 percent).

Very good performance was seen in the order intake, which grew to 163.4 million euros in the fiscal year 2022. This equated to a 15.4-percent increase in new orders posted in the Automation area in North America and in the Metrology area compared to the 141.6 million euros in 2021. At 54.1 million euros (prior year: 29.0 million euros), the highest order intake was posted in the fourth quarter. The book-to-bill ratio in 2022 reached a figure of 1.24 (prior year: 1.00).

At the end of 2022, the order backlog was worth 86.6 million euros, 46.9 percent above the figure at the end of 2021 (31/12/2021: 58.9 million euros).

Higher cash flows from operating activities, in part due to positive effects in the working capital, were particularly responsible for the substantial increase in the free cash flow (before interest and income taxes) to 14.0 million euros (prior year: minus 13.5 million euros). The working capital decreased from 69.0 million euros at the end of 2021 to 58.7 million euros at the end of the reporting year, chiefly due to the decline in contract assets.

As of December 31, 2022, the Non-Photonic Portfolio Companies had 657 employees (31/12/2021: 692 employees). Twenty-one people were in trainee positions as of the reporting date (31/12/2021: 20 trainees).

The R+D output fell to 5.6 million euros (prior year: 6.7 million euros), and included developments on behalf of customers in the amount of 2.1 million euros (prior year. 2.4 million euros). R+D expenses came to 3.5 million euros (prior year: 4.3 million euros). In 2022, the share of R+D output in total revenue in the Non-Photonic Portfolio Companies was 4.2 percent (prior year. 4.8 percent).

Capital expenditure on intangible assets and property, plant, and equipment rose to 3.8 million euros (prior year. 1.7 million euros), this rise attributable to the area of Automation in North America. In 2022, capital expenditure was offset by scheduled depreciation / amortization in the sum of 9.2 million euros (prior year: 9.9 million euros). This includes depreciation / amortization resulting from PPA impacts.

General Statement by the Executive Board on the Development of the Segments

The Advanced Photonic Solutions division benefited from good revenue and a good order intake with the semiconductor equipment industry in 2022, but the significant growth was also due to good performance in the areas of Biophotonics and Industrial Solutions, and the contributions made by the former BG Medical and the SwissOptic Group, acquired in late 2021. The division also achieved an appreciable improvement in EBITDA and free cash flow.

In 2022, the Smart Mobility Solutions division generated a year-on-year increase in revenue, with the figures rising from quarter to quarter. EBITDA also improved slightly. Good performance was also seen in the order intake, which resulted in a noticeable increase in the order backlog. In 2022, the division further succeeded in generating a positive free cash flow following a negative figure in the prior year.

A difficult environment and structural challenges were reflected in the business performance of the Non-Photonic Portfolio Companies in 2022. Key indicators such as revenue and earnings did not match prior-year´s figures but the growth in the order intake and the positive free cash flow achieved were pleasing.

Over the course of the past fiscal year, Jenoptik boosted its capital expenditure on expanding production capacity and developing new products.

In the opinion of the Executive Board, Jenoptik also managed to establish a broader range of systems and secure both international projects and new customers in 2022. Both divisions and the Non-Photonic Portfolio Companies were able to post more orders and a higher order backlog in 2022 than in the prior year. This created a good basis for the Group's further development. In terms of revenue, we also posted increases in all three segments subject to reporting requirements.

Management Report of JENOPTIK AG

(Abridged version according to HGB)

Supplementary to the reports on the Jenoptik Group, the development of JENOPTIK AG is set out below.

JENOPTIK AG is the parent company of the Jenoptik Group and based in Jena. Its asset, financial, and earnings position is fundamentally defined by its capacity as the holding company of the Jenoptik Group. The operating activities of JENOPTIK AG primarily cover the provision of services for subsidiary companies and the subleasing of commercial premises.

The Annual Financial Statements of JENOPTIK AG are prepared in accordance with German commercial law (HGB) and the supplementary regulations of the German Stock Corporation Act (AktG). The Consolidated Financial Statements are prepared in accordance with the International Financial Reporting Standards (IFRS) valid on the reporting date and the interpretations of the International Financial Reporting Interpretations Committee (IFRIC) whose application is mandatory within the European Union, as well as the regulations under commercial law in accordance with § 315e (1) of the HGB that apply on a supplementary basis. This gives rise to differences in the accounting and measurement methods, chiefly concerning fixed assets, derivatives, provisions, deferred taxes, leases, and revenue recognition.

The Group's strategic policy entails a greater focus on photonics growth markets and thus its transformation into a globally positioned photonics company.

T33 Abbreviated income statement of JENOPTIK AG (in thousand euros)

	1/1–31/12/2022	1/1–31/12/2021
Revenue	52,345	44,167
Cost of sales	46,361	44,047
Gross profit	5,984	119
Selling expenses	1,210	1,643
General administrative expenses	12,698	14,487
Research and development expenses	838	57
Other operating result	2,613	1,094
Income and expenses from profit and loss transfer agreements and income from investments	71,140	88,937
Financial result	– 1,873	– 48,483
Income taxes	7,735	9,437
Earnings after tax	55,383	16,045
Net profit	55,383	16,044
Retained profits from prior year	20,000	30,000
Accumulated profit	75,383	46,044

Asset, Financial, and Earnings Position

Earnings Position

Revenue was up 8.2 million euros on the prior year, at 52.3 million euros, mainly the result of higher revenue and intra-group services.

Selling expenses of 1.2 million euros (prior year: 1.6 million euros) covered costs for communications, advertising, sponsorship, and strategic brand projects.

Administrative expenses fell year-on-year by 1.8 million euros, to 12.7 million euros, and primarily included personnel costs in the amount of 5.3 million euros (prior year. 8.3 million euros). The sharp decline in personnel costs is due in part to a higher internal allocation, which resulted in a corresponding disclosure to the cost of sales.

JENOPTIK AG posted research and development expenses amounting to 0.8 million euros (prior year: 0.1 million euros), primarily covering expenditure for innovation management and the coordination of R+D work in the Jenoptik Group.

The other operating result included other operating income of 27.9 million euros (prior year: 19.2 million euros), which was offset by 25.3 million euros of other operating expenses (prior year: 18.1 million euros).

Other operating income primarily included currency gains worth 9.4 million euros (prior year: 4.7 million euros), intragroup cost allocations of 2.0 million euros (prior year: 8.4 million euros), and income arising from the reversal of provisions in the sum of 0.2 million euros (prior year: 1.5 million euros). In addition, other operating income in the fiscal year 2022 included income of 16.1 million euros from the sale of financial investments in connection with the sale of VINCORION.

Key items in the other operating expenses were currency losses of 9.6 million euros (prior year: 6.1 million euros) and expenses for intra-group cost allocations of 2.6 million euros (prior year: 8.7 million euros). In addition, other operating expenses were affected by unscheduled write-downs on short-term loans to an associate amounting to 8.8 million euros. In the prior year, both income and expenses for intra-group cost allocations were heavily influenced by consulting costs for M+A activities.

The financial result of minus 1.9 million euros (prior year: minus 48.5 million euros) included unscheduled write downs of 0.2 million euros (prior year: 0.2 million euros) on loans to associates. In addition, in the prior year, impairment losses of 47.2 million euros were recognized on the investment carrying amounts of subsidiaries.

T34 JENOPTIK AG Statement of financial position (in thousand euros)

	31/12/2022	31/12/2021
Assets		
Intangible assets, property, plant, and equipment	87,007	79,587
Financial investments	982,739	1,047,663
Non-current assets	**1,069,747**	**1,127,250**
Inventories, trade receivables, and other assets	146,264	135,732
Cash and cash equivalents	779	3,305
Current assets	**147,043**	**139,036**
Accruals and deferrals	5,487	1,764
	1,222,276	**1,268,051**
Liabilities		
Share capital	148,819	148,819
(Conditional capital 14,950 thousand euros)		
Capital reserves	180,756	180,756
Revenue reserves	298,836	287,101
Accumulated profit	75,383	46,044
Equity	**703,794**	**662,721**
Provisions	**19,663**	**16,978**
Liabilities to banks	442,429	531,538
Trade accounts payable	7,920	11,914
Other liabilities	48,471	44,271
Liabilities	**498,819**	**587,723**
Accruals and deferrals	0	629
	1,222,276	**1,268,051**

Income taxes were 1.7 million euros below the figure for the prior year due to lower taxable income of the companies consolidated for tax purposes in the fiscal year 2022.

JENOPTIK AG's net profit increased overall by 39.3 million euros, to 55.4 million euros (prior year: 16.0 million euros). The company's earnings position was mainly influenced by the subsidiaries' earnings, which are paid to JENOPTIK AG on the basis of existing control and profit and loss transfer agreements. The net earnings contribution of the subsidiaries declined on the prior year, by 17.4 million euros to 71.1 million euros. This was the result of good earnings performance with the semiconductor equipment and medical technology industries, as well as the positive development in the areas of Biophotonics and Industrial Solutions. This was offset by the negative result of JENOPTIK Advanced Systems GmbH, which was only compensated for the short fiscal year January 1 to June 30, 2022, due to the sale of VINCORION in the past fiscal year.

Contrary to the forecast for 2022, revenue increased significantly, resulting in particular from intra-group services. The result forecast for 2022, which had been expected to be stable compared with the prior year, was significantly better than expected with an increase in net profit before profit and loss transfers from subsidiaries of 56.5 million euros. This was due to significantly lower write-downs on financial investments and marketable securities amounting to 9.1 million euros (prior year: 47.3 million euros), significantly higher other operating income in connection with the sale of VINCORION (16.1 million euros), and increased revenue from price increases for intra-group services.

Asset and Financial Position

At 1,222.3 million euros, JENOPTIK AG's total assets were 3.6 percent down on the prior-year figure of 1,268.1 million euros.

The assets side of the Statement of Financial Position reflects JENOPTIK AG's status as a holding company. Alongside a capitalization ratio of 87.5 percent, of which 80.4 percent was attributable to financial investments and 7.1 percent to other fixed assets (in particular real estate), the total assets are also dominated by a high level of loans to associates (10.9 percent).

The 64.9-million-euro decrease in financial investments was mainly due to the sale of shares in associates and loans to associates in connection with the sale of VINCORION (58.6 million euros). In addition, loans to subsidiaries in the amount of 9.5 million euros were reclassified to current assets due to their shorter maturity.

Receivables from associates of 133.2 million euros (31/12/2021: 134.3 million euros) essentially concerned cash pool balances of subsidiaries worth 124.5 million euros (31/12/2021: 127.8 million euros) and short-term loan receivables against two subsidiaries, which were still valued at 5.9 million euros on the reporting date.

The reduction in cash and cash equivalents by 2.5 million euros as of the balance sheet date was the result of active liquidity management.

As a holding company, the financial position of JENOPTIK AG is significantly affected by the liquidity situation of the Group. Overall we assess our liquidity situation as comfortable. In this regard we refer to the section "Financial position".

Accruals and deferrals essentially comprised accrued costs for IT service and maintenance contracts.

On the liabilities side, the financing function of JENOPTIK AG as a holding company for the Jenoptik Group was particularly evident. Equity came to 703.8 million euros (57.6 percent of total assets), liabilities to banks to 442.4 million euros (36.2 percent of total assets).

In particular thanks to the positive annual result in the sum of 55.4 million euros, equity improved by 41.1 million euros, rising from 662.7 to 703.8 million euros. This was countered by the payment of dividends of 14.3 million euros for the fiscal year 2021. The equity ratio increased from 52.3 percent to 57.6 percent, also due to the reduction in loan liabilities.

Provisions were up from 17.0 million euros to 19.7 million euros, the increase of 2.7 million euros due in particular to higher other provisions of 12.2 million euros (31/12/2021: 9.6 million euros). These include provisions for personnel and outstanding invoices, as well as provisions of 3.1 million euros recognized in the fiscal year 2022 for indemnifications in connection with the sale of VINCORION.

The 89.1-million-euro decrease in loan liabilities, from 531.5 million euros to 442.4 million euros, relates to the repayment of the last tranche of the debenture bonds from 2015 in the amount of 55.0 million euros and the reduction in the utilization of the syndicated loan from 75.0 million euros to 45.6 million euros.

Other liabilities essentially comprised 29.4 million euros of cash pool liabilities and 14.0 million euros to offset losses at a subsidiary.

Over the reporting year, JENOPTIK AG's debt ratio changed, primarily due to the decrease in loan liabilities, from a 47.8-percent to a 42.4-percent share of total assets.

As of December 31, 2022, JENOPTIK AG had 283 employees, of which 30 were temporary workers and trainees (31/12/2021: 261 employees, of which 27 temporary workers and trainees).

General statement by the Executive Board on the business development

The business performance of JENOPTIK AG is dependent on the development of the business development of the Group as a whole. In this respect we refer to statements in the section "General statement by the Executive Board on the development of business".

Risks and opportunities

Due to its function as a holding company, JENOPTIK AG's development of business is subject to the same risks and opportunities as the Jenoptik Group. JENOPTIK AG generally participates in the risks of investments and subsidiaries in line with their equity interests and financial investments. The risks and opportunities of the Group and the segments are set out in the Risk and Opportunity Report.

Forecast report

The annual result of JENOPTIK AG is largely dependent on the development of contributions to earnings by the subsidiaries.

Based on the development of business set out in the Group Forecast Report, JENOPTIK AG is expecting substantially higher revenue in the fiscal year 2023 due to significantly higher revenue from expected price increases for energy and ancillary rental costs. The increased revenue will be offset by equally increased costs for ancillary rental costs. Revenue from holding company services and service allocations will remain at the prior-year level.

JENOPTIK AG's earnings – prior to transfer of subsidiaries' earnings contributions and excluding any effects from corporate transactions and unscheduled depreciation and amortization – is expected to remain stable compared to the past fiscal year. For a detailed presentation of the expected future development of the Jenoptik Group and its segments, we refer to the Forecast Report.

Risk and Opportunity Report

Principles of Risk and Opportunity Management (Enterprise Risk Management) at Jenoptik

Jenoptik operates in a global and complex business environment and is therefore constantly exposed to internal and external influences on its business activities. Every business decision therefore involves weighing the risks and opportunities within the corporate environment. This consideration, for Jenoptik, is one of the principles of responsible and value-oriented corporate management.

Jenoptik's comprehensive opportunity and risk management system is based on an interactive and management-oriented approach. Its enterprise risk management (ERM) system accounts for both risks and opportunities, and is integrated throughout the company. The goal is to support the implementation of the group strategy and to define actions that create an optimum balance between growth and return targets on the one side and the associated risks on the other. In implementing the strategy, it is necessary to identify strategic, operational, financial as well as compliance-related risks and opportunities, and within these categories sustainability risks, early on, and to present, evaluate, and manage them transparently and in a way that facilitates comparison. This is achieved by promoting an open risk culture, and through regular further development of the enterprise risk management system guided by the ISO 31000 standard. G13

Structure and organizational integration of enterprise risk management

The Supervisory Board's Audit Committee monitors the existence and effectiveness of Jenoptik's enterprise risk management. Overall responsibility for the ERM system in the Jenoptik Group lies with the Executive Board. The group-wide approach is set out in a risk manual. The structure and process is shown in figure G14.

Functional responsibility lies with the central Compliance & Risk Management department, which reports on group risk management directly to the CFO, who is also defined as the Group's risk officer.

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G13 Risk assessment

Metrics	Probability of occurence	Consequences / extent of damage: Qualitative		Quantitative EBITDA impact
5 = High	up to 50%	The goal of the Group or the risk reporting unit is jeopardized	or	> 20%
4 = Medium-high	up to 40%	The goal of the Group or the risk reporting unit has to be adapted immediately	or	> 15 to 20%
3 = Medium	up to 30%	The goal of the Group or the risk reporting unit has to be adapted in the medium term	or	> 10 to 15%
2 = Low	up to 20%	Further measures are necessary in order to achieve the goals of the Group or the risk reporting unit	or	> 5 to 10%
1 = Very low	up to 10%	Minor consequences	or	> 0 to 5%

The Risk Committee consists of the members of the Executive Board and the Head of Central Compliance & Risk Management. It consolidates all aggregated reporting results into an overall evaluation of the Group's risk position.

The definition and ongoing development of the system takes place in the close cooperation of central Compliance & Risk Management, the Executive Board, and the Audit Committee of the Supervisory Board. The Executive Board is responsible for the system and approves it. The Head of Central Compliance & Risk Management communicates the current requirements of the risk management system, advises on its practical implementation, and monitors the measures and results of the risk management processes.

Central Compliance & Risk Management also organizes and manages the system, working closely with the other central departments and the risk officers in the divisions. These, in turn, are responsible for implementing the ERM system in the respective risk reporting units. The risk reporting units are defined reporting units that are employed to accurately identify and allocate risks and opportunities. They can be both business units and individual subsidiaries or regionally consolidated units.

While Internal Audit monitors the effectiveness, appropriateness, and efficiency of enterprise risk management, the Supervisory Board's Audit Committee performs the external monitoring for or in conjunction with the Supervisory Board.

As part of the audit of the Annual Financial Statements, the early risk warning system of JENOPTIK AG is examined by the auditor with regard to the requirements of stock corporation law. The audit for the fiscal year 2022 showed that Jenoptik's ERM system complies with the legal requirements for an early risk warning system and that it is suitable for the early detection of developments that could jeopardize the continued existence of the Group.

The group of consolidated companies exposed to risk corresponds to those included in the consolidated financial statements.

Enterprise risk management system procedure and processes

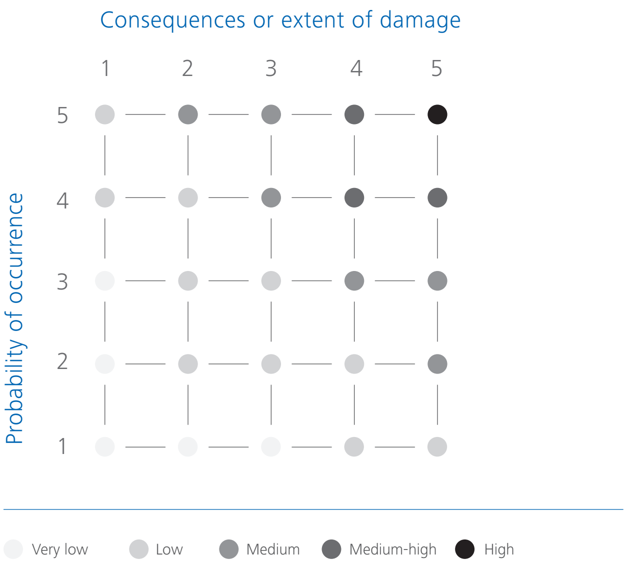
Risks are defined as potential developments and events that may result in a negative divergence from objectives and forecasts for the company and involve uncertainty regarding the occurrence of an event. Correspondingly, opportunities are events that may result in a positive divergence from expected targets.

G14 Process of risk reporting

Risk Officers in the divisions and central departments	Assessment of single risks
Central Functions	Review of aggregated risks
Corporate Compliance & Risk Management department	Review and analysis of group risks
Risk Committee	Analysis of group risks
Executive Board	Final assessment of group risks
Audit Committee Supervisory Board	Evaluation of group risks

The self-contained, regular, and IT-supported risk management process consists of various risk assessments, which are carried out using a combination of top-down and bottom-up elements. In order to ensure the most in-depth risk identification and comparability possible within the company, a risk register was developed to support management in the evaluation of risks. It comprises several specified categories, further divided up into subcategories, which are associated with predefined risk symptoms and provide the risk reporting units with a framework to assign potential risks and opportunities. This is to ensure that each risk reporting unit deals with the entire risk landscape and that, simultaneously, an aggregation of the results is guaranteed across the specified categories. While operational and financial targets are analyzed over a time frame of up to two years, strategic and compliance-related topics are considered for periods of up to four years. In the current system, sustainability risks are not yet identified in a separate risk category but are covered in the existing risk categories. G16

G15 Calculation of risk scores



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G16 Risk and opportunity categories

Operational Risks / Opportunities	Strategic Risks / Opportunities
Supply Chain Management / Safety and Environmental Protection / Production (incl. Quality Management) / Marketing & Sales / Patents & IP rights / Human Resources Management / IT / Compliance / Legal Affairs / Real Estate	Market Development / Product Development (incl. Research and Development) / Corporate Development (Portfolio and Structure) / Organizational Setup (Processes and Resources)
Financial Management Risks / Opportunities	**Compliance Risks / Opportunities**
Accounting / Finance Management (Treasury) / Controlling / Taxes	Corporate / Criminal / Competition Compliance Data Protection / Data Security

Within the scope of the risk analysis, the risk reporting units determine the risks and opportunities, recorded by divisional risk managers, in order to be able to undertake a valid risk assessment in the next stage regarding the assessment methods (qualitative or quantitative) and the measures already taken or still required. The information is recorded using both the gross and net methods. Only the assessed residual risks (net risks) are used for aggregation and reporting, i.e., mitigating measures are already included in the assessment. The assessment of a risk is the product of the probability of occurrence and the quantitative amount of loss or the qualitative extent of damage. The opportunities are evaluated in the same way.

There is a scale of 1 to 5 for both assessment factors mentioned, i.e. the probability of occurrence and amount of loss, with 1 being the smallest and 25 the greatest possible risk indicator. G15

Every six months, the results of the assessments are requested by central Compliance & Risk Management at the risk reporting units and aggregated to the Group Risk and Opportunity Report. The findings are then validated by the central Corporate Center prior to discussion on the Risk Committee. The Executive Board makes a general assessment, is informed of the impact on risk-bearing capacity, which is determined as part of a Monte Carlo simulation and, as necessary, approves required further action. IDW audit standard 340 on auditing the early risk warning system, applicable since January 1, 2021, is taken into account by integrating a suitable risk-bearing capacity concept into our enterprise risk management process. The Group Risk and Opportunity Report is then presented to and discussed by the Audit Committee of the Supervisory Board and the Supervisory Board itself.

In addition, any risks identified during the year that have a high probability of occurrence and significant potential for damage are communicated without delay to the Head of Central Compliance & Risk Management and the Executive Board. Following joint analysis with the technical departments, they decide on further measures to be taken and, if necessary, the required communication.

Risk prevention and assurance of compliance

Prevention is a key element of the risk management system, and an integral part of regular business operations and committee work. It essentially comprises risk monitoring as part of a range of assessments and special approval procedures. Consequently, risks and opportunities, as well as their impact on the company, are discussed during the monthly meetings of the Executive Board, the EMC meetings, and the quarterly business reviews. At the same time, potential risks to achieving the strategic goals can be considered directly in the strategy development process and suitable measures adopted.

Compliance with national and international compliance requirements is an integral part of risk prevention and of the processes of Jenoptik's risk management system. In order to improve employee awareness and achieve a company-wide uniform understanding of our compliance standards, regular training is provided on subjects relevant to compliance, such as anti-corruption or anti-trust law, as well as data protection issues. Online training on key compliance issues is obligatory for all employees. More information can be found in the Corporate Governance Statement. A help desk is available on the intranet to assist employees on any risk or compliance issues they may have. The guidelines implemented within the Group with regard to important business processes are regularly reexamined, expanded, and updated. They are published on the intranet. Together with the Code of Conduct for Jenoptik employees, they are a further aspect of risk prevention.

The Codes of Conduct for suppliers and sales partners of Jenoptik oblige contractors of Jenoptik to comply with various compliance requirements in accordance with international standards. Central business partner screening (third-party due diligence) is used to check whether a cooperation is viable from a compliance perspective.

Jenoptik therefore has a preventive system of regulations, processes, and controls that enable it to identify any possible deficits in the company and to minimize them using appropriate measures at an early stage.

Alongside the risk and compliance management systems, the Internal Control System (ICS) is a key element of corporate governance. It covers technical and organizational regulations and control steps to ensure compliance with guidelines and prevent damages, as well as clear divisions of responsibility and function, in adherence to the principle of double-checking. In particular, its intention is to ensure the security and efficiency of transaction processing as well as the reliability of financial reporting. In the past fiscal year, ICS self-assessments were again carried out at all group companies, which had to be made by the respective management. Monitoring and evaluation of the completed self-assessments is carried out by Internal Audit. Reported deficits are analyzed and appropriate countermeasures are defined to ensure they are permanently eliminated. In addition, the fiscal year 2022 saw the start of the introduction of a globally uniform, documented, and tool-supported ICS for the larger Jenoptik companies (number of employees > 30) in the financial area. This will be monitored by regular specific ICS audits carried out by Internal Audit. There are plans to extend the system to significant non-financial processes in 2023, and to introduce system-based effectiveness monitoring. In the long term, the documented internal control system will replace the ICS self-assessment currently still carried out at the larger Jenoptik companies.

Internal Audit supports the Jenoptik Group in achieving its goals by using a systematic and comprehensive approach to assessing and improving the effectiveness of its risk management, control, and monitoring processes. It is responsible for the risk-oriented audit of all processes in the divisions, regions, group companies, operating sites/facilities, strategic business units or functions/specialist areas of the Group (“audit universe”), and follow-up of measures for any deficiencies identified. 17 audits were carried out in 2022. In order to ensure the greatest possible independence and objectivity, the function is a staff function of the Executive Board at JENOPTIK AG. In addition to ongoing reporting to the Executive Board, reports are also submitted directly to the Audit Committee every six months.

Key features of the Internal Control and Risk Management System (ICS) with regard to the accounting processes of the Group and JENOPTIK AG (§ 289 (4) and § 315 (4) of the German Commercial Code [HGB])

The accounting-related internal control system is part of the overall ICS of the Jenoptik Group. Its purpose, in part, is to ensure a due and proper process in preparing the Consolidated Financial Statements, guaranteeing compliance with statutory regulations, accounting rules, and internal guidelines for uniform accounting and valuation principles, which are binding for all companies included in the Consolidated Financial Statements. New regulations and changes to existing rules are analyzed and implemented promptly. All employees involved in the accounting process receive regular training. Regional financial delivery centers carry out some operational accounting processes. They also support the harmonization of processes, their efficiency and quality, and thus also the reliability of the internal control system.

Access restrictions in the respective IT systems protect the financial systems against abuse. Centralized control and regular backup of the IT systems reduce the risk of data loss.

In order to prepare the Consolidated Financial Statements, data from the companies is recorded directly by them in the consolidation tool. The transferred data of the statements and financial statements of consolidated companies is verified by manual and technical system inspections. All the consolidation processes required for the preparation of the Consolidated Financial Statements are documented. These processes, systems, and controls enable Jenoptik to ensure a group accounting process that complies with both the IFRS and statutory requirements. The group auditor audits the Consolidated Financial Statements prepared in accordance with IFRS as well as the Annual Financial Statements of JENOPTIK AG in accordance with § 317 HGB and the EU Regulation on Auditors (No. 537/2014) in compliance with the German generally accepted standards for the audit of financial statements promulgated by the Institut der Wirtschaftsprüfer (IDW).

The Group's Risk and Opportunity Profile

The Group's risk profile for 2022 and subsequent years was determined with the aid of the risk and opportunity assessments from the segments. Part of the risk assessment of the segments is a review by the central departments of the Corporate Center, whose risk assessments are then included in the segment reporting and in the final group assessment. Our processes for identifying, managing, and controlling risks involve non-financial environmental, social, and corporate governance risks, including climate-related risks, at all levels. Our risk and opportunity management makes possible a direct comparison of the individual risk profiles at the level of risk symptoms. The risk assessment at the level of the risk and opportunity categories in the individual subcategories is shown in more detail in the following chart. T35

The Group's overall risk is calculated after weighting the individual segments according to their shares of total group EBITDA.

Overall, the risk to which the Group is exposed remained in the medium risk range. No significant changes on the prior year were identified.

Once again, strategic risks and opportunities for the Group were on average assessed as the most important, compared to operational and finance management risks, in 2022. Our focus on photonic market segments represents both an opportunity and a risk to the Group.

With the gradual phasing-out of the global emergency regulations relating to the Covid-19 pandemic and, in particular, the official end of China's zero-Covid strategy, the risks that may arise from possible actions to contain the pandemic and that

T35 Risk profile of the Jenoptik Group 2022

	Group risk assessment	
	Current (2022)	Prior year (2021)
Strategic risks		
Market development	Medium	Medium
Product development (incl. R+D)	Medium	Medium
Corporate development (portfolio und structure)	Medium	Medium
Organizational setup (processes and resources)	Medium	Medium
Operational risks		
Supply chain management	Medium	Medium high
Safety and environmental protection	Medium	Low
Production (incl. quality management)	Medium	Medium
Marketing and sales	Medium	Medium
Patents and IP rights	Low	Low
Human resources management	Medium	Medium
IT	Medium high	Medium
Legal affairs	Low	Low
Real estate	Medium	Low
Financial management risks		
Accounting	Low	Low
Finance management	Low	Low
Controlling	Medium	Low
Taxes	Medium	Low
Compliance risks		
Corporate/criminal, and competition compliance	Medium	Medium
Data security and data protection	Medium	Medium
Total risks	Medium	Medium

could have an influence on Jenoptik's business activities are decreasing. There is still the possibility of regional outbreaks and new mutations, which require regular reassessment.

The global trend toward the lifting of coronavirus restrictions offers opportunities for our business activities, such as customer service and visits, trade show participation, and international travel.

There remain uncertainties arising from trade and geopolitical conflicts, some of which are increasing again in a number of regions. For example, the increasing economic decoupling of the US and China due to rising trade barriers and technical regulations may impede global growth. The tensions between China on the one hand and the partners Taiwan and the US on the other hand cannot be assessed with certainty at present. Despite the international orientation of the semiconductor industry, a significant impact on the global semiconductor market can be assumed in the event of escalation due to Taiwan's strong position in some manufacturing stages. Russia's war against Ukraine with the associated sanctions does not pose any direct risks due to the almost non-existent business activities with both countries. Indirectly, it may continue to have an impact above all on energy supplies and influence their price development as well as the short-term availability of raw materials. This could further fuel currently high inflation and pose the risk of a continuing wage-price spiral. Similarly, the blocking of financial transactions may also have an impact on the procurement or distribution of non-sanctioned goods. Both could severely impact on overall economic development in Jenoptik's growth markets and on the success of our business activities by negatively affecting our cost structure through price increases in raw materials and intermediate goods. Jenoptik is attempting to counter this through various measures in purchasing, through further optimization of the internal cost structure, and, if necessary, through price adjustments in close cooperation with our customers. At this point in time, the war situation remains dynamic, and an escalation and expansion of the conflict, including NATO involvement, cannot be ruled out. An expansion of the war would have a significant impact on the European economies.

Jenoptik is dependent on the economic development of specific industries and markets, and so we are particularly affected by the ongoing weakness of the automotive markets. The global trend toward digitization and various (supra-)national support programs to strengthen the local semiconductor industry continue to drive demand for optical technologies in the semiconductor equipment industry and offer major opportunities for Jenoptik, but are also accompanied by challenges.

Jenoptik is exposed to intense competition throughout its business. The company counters the risk of being squeezed out by competitors with, for example, innovative USPs, specific and flexible changes to its product range, or customization options for existing products and solutions. In addition, mergers and acquisitions in the markets we target may intensify the competitive environment, and potentially improved cost structures of competitor companies, with a corresponding increase in pricing pressure, may have negative effects on group earnings. Jenoptik counters this risk by continuously analyzing its portfolio, i.e., by determining whether and how specific acquisitions and disposals may usefully support its strategy to generate lasting profitable growth. M+A activities and the integration of acquisitions pose a fundamental risk to the Group. This risk is proactively countered with extensive due diligence and a structured integration process tailored to the acquired company.

Operational risks and opportunities were assessed with low to medium-high risk indicators for the entire Group on average, the Group's risk level is medium.

The increasing number of complex international projects, particularly those of a technically challenging nature, place enormous operational demands on all parts of the business. Supplier management and production are predominantly responsible for assuring the quality of our products. The use of single-source suppliers and the continuing possibility of insolvencies, for example, may increase the risk of dependency on or the loss of individual suppliers. Inflationary pressures may also continue to increase the price pressure on products purchased by our suppliers. Ongoing refinement of our purchasing and production organization therefore aims to ensure that our customers continue to receive high-quality, tailored solutions when they need them.

Global IT systems and processes are of great significance to Jenoptik in all its divisions. The security and availability of these systems have top priority. Data is stored on redundant storage media and secured against data loss by means of a partially tiered archive and backup system. This aims to enable rapid data recovery in the event of a crisis situation. Due to increasing IT threats worldwide, for example in the form of social engineering such as phishing attacks or ransomware, Jenoptik is actively taking both preventive and corrective measures to reduce the risk of cyber attacks. As examples, all IT security issues are coordinated by the Chief Information Security Officer, existing processes are continuously scrutinized and adjusted, technical measures are implemented, and employees in positions of responsibility are provided with internal training. Jenoptik has also set up a Security Operations Center (SOC) to better ensure protection of its IT infrastructure. It integrates, monitors, and analyzes all security-related systems such as our corporate networks, servers, workstations, and internet services, alerts the affected units, and takes action to protect our data and applications. However, these measures to protect our IT infrastructure, intellectual property, and portfolio can never result in complete risk mitigation.

Our employees make the most important contribution to the company's success. As an international technology company, Jenoptik needs dedicated and highly qualified colleagues – now and in the future. Due to the difficulties in attracting qualified employees, particularly in Germany, Jenoptik is also exposed to the risk of not being able to fill vacant positions as they arise. This risk is countered with a large range of targeted measures, including the establishment of a succession planning process for management positions, leadership and professional career programs, an employer branding campaign, and both attractive and personalized incentive and loyalty schemes.

T36 Risk profiles of the segments 2022

	Advanced Photonic Solutions division		Smart Mobility Solutions division		Non-Photonic Portfolio Companies division	
	2022	2021	2022	2021	2022	2021
Strategic risks						
Market development	Low	Low	Medium	Medium	Medium high	Medium high
Product development (incl. R+D)	Medium	Medium	Medium high	Medium high	Medium	Medium
Corporate development (portfolio & structure)	Medium	Medium	Medium	Medium	Medium	Medium
Organizational setup (processes and resources)	Medium	Medium	Medium	Medium	Medium	Medium high
Operational risks						
Supply chain management	Medium	Medium high	Medium high	Medium high	Medium	Medium high
Safety and environmental protection	Medium	Low	Medium	Medium	Low	Low
Production (incl. quality management)	Medium high	Medium high	Medium	Medium	Medium	Medium
Marketing and sales	Low	Medium	Medium	Medium	Medium	Medium
Patents and IP rights	Low	Low	Medium	Medium	Low	Low
Human resources management	Medium	Medium high	Medium	Medium	Medium high	Medium
IT	Medium high	Medium high	Medium	Medium	Medium	Medium
Legal affairs	Low	Low	Low	Low	Low	Low
Real estate	Medium high	Medium high	Low	Low	Medium	Very low
Financial management risks						
Accounting	Low	Low	Low	Low	Low	Low
Finance management	Low	Low	Low	Low	Medium	Medium
Controlling	Medium	Medium	Low	Low	Low	Low
Taxes	Medium	Medium	Medium	Medium	Medium	Low
Compliance risks						
Corporate/criminal and competition compliance	Medium	Medium	Medium	Medium	Low	Low
Data protection & data security	Medium	Medium	Medium	Medium	Medium	Low
Total risks	Medium	Medium	Medium	Medium	Medium	Medium

In view of Jenoptik's international business operations, one group-wide risk is non-compliance with legal, ethical, and contractual requirements. Successfully completed M+A activities, in particular, require careful integration and coordination processes to ensure full integration of the acquired companies into our corporate governance. The continuous improvement of our compliance structures and processes assists all departments and business units in this regard. As a company with customers and business partners in numerous countries and global clients in the public sector, Jenoptik must grapple with many, partly growing, compliance requirements in a wide range of different markets. Although the necessary organizational structures and measures to minimize potential compliance violations have been implemented with a group-wide export control and data protection organization, the central Compliance and Risk Management department, and corresponding processes, such violations cannot be entirely ruled out. Strict adherence to the compliance program and the continuous development of the compliance management system aim to close up any process gaps and ensure that processes comply with laws and regulations.

In 2022, financial management risks were assessed on average as low throughout the Group. The issues cited below also include the segment-specific risks. One key task of the central Treasury department is to safeguard and coordinate the financing of all group companies over the long term. For this purpose, Jenoptik has access to a range of financing instruments.

Currency-related risks arising from the Group's international activities are identified together with the group companies and reduced by adopting suitable measures such as the conclusion of currency forward transactions.

The risk of changing interest rates is in part reduced by the conclusion of fixed interest loans. Interest derivatives are also used where required.

Group-wide liquidity planning aims to identify liquidity risks at an early stage and systematically minimize them. Regular treasury reports and quarterly planning updates have been established for liquidity control and monitoring.

In the Controlling and Accounting departments, opportunities predominantly arise from the continuing expansion and optimization of the standardized SAP system, and from the centralization of accounting activities for continuous quality improvement. Thanks to the establishment of new financial controlling instruments based on modern IT solutions, Jenoptik counters the risk of lacking business-critical information in internal reporting.

From this year on, compliance risks are identified and shown as a separate risk category. These risks, which include corporate, criminal, and competition law risks, as well as data protection, are at a medium level throughout the Group.

Risk and Opportunity Profiles of the Segments

The risk and opportunity profile of the Jenoptik Group was derived from the risk profiles of the Advanced Photonic Solutions division, the Smart Mobility Solutions division, and the Non-Photonic Portfolio Companies. Financial management risks are shown in a consolidated form in the Group risk and opportunity profile. T36

Advanced Photonic Solutions

Strategic risks and opportunities primarily arise on the basis of demand in the semiconductor equipment industry. They may have a significant positive or negative effect on results. Beyond this, the focus on individual larger customers and the resulting customer concentration fundamentally harbors the risk that poor business performance or the loss of customers may impact severely on revenue and earnings. On the other hand, the loyalty of such customers enables profitable revenue growth due to economies of scale. Due to the highly specialized technology portfolio of both Jenoptik and its key customers, the dependency exists in both directions. Although there is always an inherent threat posed by the growing number of mainly Asian competitors and the trend among suppliers and customers toward forward and/or backward integration, it may still be achieved through the continuous expansion of existing competitive advantages, in-house development activities, and internationalization. In addition, the division addresses this risk by continuously reviewing vertical integration with the aim of supplying more system and service solutions to its customers.

With regard to the use of financial instruments, we refer to the Notes, section 8.2

Both, the growing importance of digitization, further accelerated by the Covid-19 pandemic, and the (supra-)national industrial policy that aims to reduce dependency in the semiconductor sector on individual countries, offer major opportunities for the division both in the current situation and in coming years, accompanied by increasing challenges in operational issues such as supply chain management, attracting skilled workers, and increasing production capacity. In these areas, Jenoptik competes with other companies in the semiconductor equipment industry. America's subsidy policy is accompanied by increasing requirements in export handling, as it is associated with geopolitical interests. The relentless progress being made in medical technology and demographic developments, especially in Asia and the Americas, are also boosting demand for product solutions. Ongoing development of the product portfolio and the strategic acquisition of BG Medical GmbH in the field of medical technology, as well as Jenoptik's stronger market orientation, mean that the requirements of our customers can be better served. Increasing financial problems in healthcare systems, however, are resulting in growing price pressure among suppliers. The trend toward increasing complexity in the market environment makes clear and reliable forecasts more difficult, especially in innovative areas of application.

The exacting technology and quality requirements placed on Jenoptik and our suppliers with regard to source materials and production technology result in particular operational risks and opportunities in supplier management and production processes. For many components manufactured in the division, there are only a very limited number of qualified suppliers that are able to meet the necessary specifications in a timely manner. When such a supplier is lost or the customer changes specifications, this can result in corresponding problems in the development or production process. To ensure a stable base of suitable suppliers in the medium and long term, the division's partners are subject to ongoing qualification with the help of Strategic Purchasing. In addition, special supplier development teams support our suppliers where there is a need to further develop their organizational arrangements or business processes. Strained supply chains may also pose risks, especially at a time of increased demand for our products. For specific materials, these risks may be seen in fixed allocations by suppliers or sharp price increases. Jenoptik is attempting to overcome these challenges by setting up dedicated task forces.

Specific customer requirements, especially regarding the quality and growing number of complex high-end products, and the dynamic growth of some business areas, lead to rising demands on production technologies, capacities, and floor area concepts, which are met through targeted expansion or replacement investment. Delays in necessary investments may increase the risk of quality and performance requirements not being met to the agreed schedule, or at all, resulting in either delivery delays or non-acceptance by the customer.

The division is investing in new sites and continuously developing existing sites around the world while maintaining operations in order to better serve growing demand in the future.

Smart Mobility Solutions

Uncertain economic and political developments around the world represent the main strategic risks and opportunities currently affecting the Smart Mobility Solutions division. As a supplier to international public-sector customers in particular, Jenoptik is exposed to both the political and economic development of the respective countries. Particularly in the event of unrest or regime change, this may result in projects being delayed or even abandoned. Due to the tight budgetary situation following the Covid-19 pandemic and the realignment of public budgets in the wake of the war in Ukraine, cuts in public investment for traffic monitoring projects cannot be ruled out for the future.

Consolidation of the traffic safety market through Verra Mobility's acquisition of Redflex in 2021 continues to pose sales market risks, especially in the United States, but also in other international markets due to the market entry of Asian competitors. The division is currently working on realigning its activities on the American market and on further product development in line with divergent regional requirements. The highly regulated European traffic safety market, which has certain barriers to market entry due to its high approval requirements, also has a supporting effect here.

At the same time, the growing demand for safety technologies, intelligent traffic flow solutions ("smart cities"), the levying of congestion charges for the use of inner-city traffic infrastructure, and compliance with emission values for air pollutants, especially in metropolitan areas, present good opportunities for the division. We aim to improve our strategic competitive position by continuously optimizing our product range and establishing a standardized platform capable of addressing the above-mentioned future issues.

The operational risks and opportunities are dominated by the difficult situation in parts of the supply chain. The products made by the Smart Mobility Solutions division require technical approval, particularly in European countries, the duration of which cannot be influenced. It is therefore not always an easy process to substitute purchased materials or modules without applying for an updated operating license. In many cases, therefore, only a very limited number of companies are qualified as suppliers. If one of these suppliers is lost or products are discontinued, challenges may arise due to the need for new approvals, modified production processes, delivery bottlenecks, and negative impacts on long-term sales. The division's partners are subject to qualification with the help of Strategic Purchasing to ensure a stable base of suitable suppliers in the medium and long term.

In addition, the division is compelled to meet strict compliance requirements, whether imposed by customers or legislation. They entail the risk of delays in our business processes or of additional costs that could adversely affect earnings. In the field of traffic safety technology, the requirements of the General Data Protection Regulation are of particular significance. They are met thanks to the further expansion of a standardized group-wide data protection organization.

Non-Photonic Portfolio Companies

The strategic risks and opportunities in the Non-Photonic Portfolio Companies are strongly influenced by the development of the automotive industry and its investments. The industry continues to face challenges due to the technological transformations and sales developments of vehicles with conventional drive trains, which pose risks to our business success as an equipment supplier to this industry. A focus on larger customers in the field of process automation is generally associated with the risk that negative business performance or the loss of customers may impact severely on revenue and earnings. Moving the division's strategy away from major, integrated projects and toward smaller one-off projects may in the short term result in a need to adjust the working capital. By addressing other branches of industry with our product portfolio, we aim to reduce our dependence on the automotive industry in the future.

In terms of operational risks and opportunities, the increasing internationalization of projects and parts of the value chain is reflected in increased demands on supplier management, manufacturing, marketing, sales, and HR management. The consistent expansion of efficient service and sales structures is of crucial importance to achieving the growth targets, particularly abroad.

Financial pressure on stakeholders throughout the automotive supply chain is steadily increasing, and may result in increased risks to the Non-Photonic Portfolio Companies due to cash flow optimization on the part of customers as well as the loss of suppliers. To counter this, we have initiated a more efficient receivables management system and the further qualification of suitable suppliers.

VINCORION

Following completion of the sale of this division on June 30, 2022, no risks and opportunities for the VINCORION business are listed here. There remain minor net risks from the utilization of indemnification granted. These have not been included in the Group's risk assessment.

For the Group, the sale of the division gives rise to opportunities relating to the share price, as the share of revenue with security and defense technology has fallen below the five percent mark. As a result, the Jenoptik share is once again available as an investment opportunity to institutional providers who have to comply with strict ESG criteria, which may have positive effects on the share price.

General statement by the executive board on the group's risk and opportunity situation

The major and controllable risks and opportunities were identified and assessed on the basis of our risk and opportunity management system. Overall, in terms of strategic, operational, and financial management risks, the Jenoptik Group's exposure to risk is marginally increased on the prior year, and currently remains in the medium risk range. The risks addressed are limited – as far as possible – by the initiation and follow-up of appropriate measures.

In addition to the specific risks set out in the Group Management Report, however, unforeseeable events may occur at any time that have a significant impact on market development, our sales and production processes, and the reputation of the company. The medium and long-term effects of the unstable geopolitical situation, such as Russia's ongoing war in Ukraine but also the increasing tensions between China on the one hand and the partners Taiwan and the US on the other, cannot be assessed with certainty at present. These may have consequences for the supply and pricing of energy, raw materials, and logistics and construction services. Despite the international orientation of the semiconductor industry, a significant impact on the global semiconductor market may be assumed in the event of escalation due to Taiwan's strong position in some stages of production. Downstream, this could result in inflation remaining high or rising in the coming years.

Overall, it can be said that a consistent focus on the Group's strategic market segments (with the help of "Strategy 2025") may gradually help to reduce the existing strategic risks. The growing importance of the photonics industry and the strong related demand for applications and devices, both from private households and companies, continues to offer Jenoptik the potential for good further growth. As mentioned in the section on Advanced Photonic Solutions, (supra-)national industrial policy in the context of the American CHIPS and Science Act and the European Chips Act can also have a supporting effect here.

Overall, there is an acceptable relationship between risks and opportunities in the Jenoptik Group. No risks were identified that may jeopardize the continued existence of the Group.

Forecast Report

Framework conditions: Future Development of the Economy as a whole and the Jenoptik Sectors

The International Monetary Fund (IMF) expects 2023 to be a difficult year economically, as the three most important economic regions – the US, the EU, and China – are all showing signs of weakness at the same time; half of the countries in the EU will see recession in 2023, as may a third of all countries worldwide. The IMF, however, sees the outlook for the global economy as "less gloomy" than last feared in the October 2022 forecast, as many economies have proved more resilient than expected and the end of the zero-Covid strategy in China could become a driver for the economy. On the other hand, a worsening of the coronavirus situation in China due to rapidly rising infections could also become a risk for the domestic and global economy. The IMF sees further risks in the possible escalation of the Ukraine war or from the impacts resulting from it, such as high energy prices. In addition, although central banks' strict monetary policies are increasingly curbing inflation, they are also increasing the risk of a possible debt crisis in many emerging and developing economies.

For 2023, the IMF is expecting year-on-year global economic growth of 2.9 percent – 0.2 percentage points higher than assumed in October 2022. Growth of 3.1 percent is forecast for 2024. T37

T37 Gross domestic product growth forecast (in percent)

	2023*	2024*
World	2.9	3.1
US	1.4	1.0
Eurozone	0.7	1.6
Germany	0.1	1.4
China	5.2	4.5
India	6.1	6.8
Emerging countries	4.0	4.2

Source: International Monetary Fund, World Economic Outlook (Update), January 2023
* Forecast

Although the IMF raised its growth forecast for China by 0.8 percentage points compared with its October forecast, it still sees considerable risks. The unpredictable further course of the coronavirus pandemic following the end of the zero-Covid policy, a crisis in the real estate market, and weaker global demand could all particularly impact on China's economic growth.

According to the IMF, the US could avoid or see only a very mild recession in 2023. In its view, labor markets are stable and consumer demand is strong, despite interest rate hikes to reduce inflation. The subsidy law passed in 2022, the Inflation Reduction Act, is intended to provide very large subsidy incentives and tax cuts in the US to green the economy. It is coupled with regulations for domestic production in the US, which is why the EU sees this subsidy program, worth around 430 billion US dollars, as discriminating against European companies that want to export environmentally friendly products to the US, or the risk that companies may relocate their investments and plants to the US. In response, the EU therefore plans to simplify its regulations for subsidies and speed up approvals, as reported by the EU Commission at the beginning of 2023.

In the eurozone, the IMF forecasts economic growth of 0.7 percent in the current year and 1.6 percent in 2024. The forecast, which is slightly higher than in October, reflects the ECB's faster rate hike and lower wholesale energy prices, as well as additional announcements to strengthen purchasing power in the form of energy price controls and financial aid. The EU Commission expects economic growth in the eurozone of 0.9 percent in 2023.

According to the IMF's January 2023 assessment, the German economy has proved surprisingly robust, making it possible to avoid a recession in the current year. After the weak growth of 0.1 percent forecast for 2023, the economy could grow by 1.4 percent year-on-year in 2024. The German government expects a year-on-year increase in gross domestic product in 2023, rather than shrinking by 0.4 percent as was feared in the fall. It is expecting a difficult year for Germany's export industry, with exports likely to grow just 2.2 percent.

Thanks to digitization, the photonics industry remains part of a growing environment, according to the Spectaris industry association. The use of lighting technologies is making an essential contribution to global market growth and has become indispensable for many innovations, e.g., as a basic technology for autonomous driving, for industry 4.0 and big data applications, for the “smart laboratory” in analytical and biotechnology, and through the use of quantum technology, which may provide photonics with its next source of growth momentum. According to Spectaris, efforts to better protect the climate and promote sustainability are expected to make a positive contribution. Light-based technologies deployed in the service of “green photonics” are key here: Spectaris expects that photonics will help to cut almost 3 billion tons of CO_2 by 2030.

Industry experts see a number of trends that will influence the photonics industry. For example, more photonic solutions may be needed in the semiconductor equipment industry as new chip factories will be built in the wake of funding programs such as the CHIPS and Science Act in the US, the Chips Act in the EU, or similar state initiatives in China, South Korea, and Taiwan. The market for industrial lasers, especially for cutting and welding applications, could also grow by 5 to 10 percent in 2023, but with uncertainties regarding China. In the semiconductor industry, EUV (extreme ultraviolet) technology is also helping to produce ever smaller chip structures. Another growing market segment for photonic components is free space optical communication: The next generation of satellites will need laser terminals for optical communication in space.

Industry experts expect a compound annual growth rate (CAGR) for the global photonics industry of at least 6 percent in the coming years: Market researcher Tematys (together with Photonics21) is forecasting a CAGR of 6 percent by 2025, to 900 billion euros, MarketsandMarkets 7.1 percent to 837.8 billion US dollars by 2025, and Triton 8.1 percent to 921.7 billion US dollars by 2028. Growth will primarily be driven by the increasing use of photonics products in the healthcare sector, in industry, and in IT and communications.

In view of strong chip demand in many industries, but also potential trade conflicts, countries and regions such as the US or the EU plan to increase their own chip capacities with support programs and thus become less dependent on supplies from abroad. Under the auspices of the European Chips Act, the EU Commission plans to build new chip factories in Europe in the medium to long term, doubling Europe’s share of global chip production to 20 percent by 2030. The US also plans to promote investment and innovation in US chip manufacturing with the CHIPS Act passed in August 2022. According to the SIA, the construction of 23 new chip factories and the expansion of 9 fabs have already been announced, which in turn will lead to investment by suppliers and equipment manufacturers. The semiconductor equipment manufacturers association, SEMI, also confirmed the positive impact of government efforts to expand production capacity and strengthen supply chains: As it says, the global semiconductor industry will invest more than 500 billion US dollars in 84 chip fabs through the end of 2023.

In terms of short-term chip demand, market analyst IC Insights expects weakness in the memory market to persist through the first half of the year, leading to a 25 percent decline in memory capital spending in 2023. In addition, US sanctions on Chinese semiconductor manufacturers adopted in October 2022, especially those related to the acquisition of chip manufacturing equipment from US companies, would cause a year-on-year drop of 30 percent in capital spending by Chinese companies in 2023. In early 2023, the US agreed with the Netherlands and Japan on further export restrictions against China, and this could impact on supply chains in the semiconductor equipment industry. For the global semiconductor equipment market, the SEMI association expects a decline from 108.5 billion US dollars in the prior year to 91.2 billion US dollars in 2023 and renewed revenue growth to 2022 levels in 2024.

The German Electrical and Electronic Manufacturers’ Association (ZVEI) expects the German electrical and digital industry to achieve a break-even point in production in 2023, corresponding to consolidation at a very high level.

Despite the overall economic uncertainties, the growth prospects for the machine vision industry remain good for the next few years, according to VDMA Machine Vision, which states that economic recovery in "seeing machines" has continued and that machine vision is a key component in automation systems. According to market research company MarketsandMarkets, the market for augmented reality and virtual reality (AR/VR) applications could grow by an average of 25.3 percent per year through 2027, which would then correspond to a volume of 114.5 billion US dollars based on 2022 revenue of 37.0 billion US dollars.

For the German medical technology industry, the Spectaris industry association is anticipating revenue growth in 2023 below the level of 2022. Growth will also be accompanied by cost increases, which will worsen earnings. A majority of companies in the industry are experiencing production constraints due to material shortages and a lack of skilled workers. According to Spectaris, long-term growth drivers are opportunities due to demographic developments, particularly in industrial nations, and high healthcare investments in many emerging countries. The pandemic has further intensified digitization within the industry; as a consequence, manufacturers' business models are moving from traditional instrument engineering via solution providers in the current decade toward suppliers of digital and holistic healthcare solutions in the next decade. Based on assessments by Frost & Sullivan, the global medical technology market will grow by an average of over 6 percent a year to 582 billion US dollars in 2025. Market researcher Fortune Business Insights forecasts the global market for medical technology devices to grow at an annual growth rate of 5.5 percent to reach a market volume of 718.9 billion US dollars by 2029. It sees development of the market being driven, for example, by increasing demand for wearable healthcare devices such as fitness trackers, the spread of chronic diseases, and the shift to home care, which requires portable, easy-to-use equipment. For the point-of-care diagnostics market segment, market researcher MarketsandMarkets calculated average growth of 10.7 percent to 75.5 billion US dollars in 2027, based on the 2022 value (45.4 billion US dollars), due to the continuing prevalence of respiratory, cardiovascular, and infectious diseases, which can be better contained with PoC diagnostics.

In the German mechanical and plant engineering industry, the VDMA industry association anticipates a minor 2-percent decline in production in 2023, as well as a year-on-year decline in revenue of 2.9 percent. The export-oriented sector will be impacted by the expected continued weak growth in China, high energy prices as a result of the war in Ukraine, and rising interest rates, it states.

Only slow improvement is expected in the automotive industry: In Germany, production and new registrations will rise again compared with the prior year, but will still be well below pre-crisis levels, according to the German Association of the Automotive Industry (VDA). The VDA expects a similar picture in the US. Only in China the car market will grow more slowly, as it has already recovered from the crisis.

The global traffic safety market is expected to grow by an annual average of 12.4 percent, to 6.6 billion US dollars, through 2028, according to the US market research company Grand View Research in its May 2021 market report. Market researcher MarketsandMarkets is expecting average annual growth of 9.6 percent through 2026, with key roles for increasing urbanization and expansion in the transport and traffic sector, the further development of smart systems, and initiatives for greater road safety such as "Vision Zero". Within the speed monitoring segment, automatic license plate recognition (ALPR) accounts for a significant portion of industry revenue, and demand here is forecast to remain solid through 2028. Also becoming more important are services, or the ability to provide end-to-end monitoring and maintenance services.

Globally, the "Decade of Action for Road Safety 2021-2030" aims to largely prevent road traffic deaths and injuries. According to an EU regulation, all new vehicle types must be equipped with an Intelligent Speed Assistant (ISA) from July 2024 on. This assistance system is to become a supporting speed brake in the vehicle by means of sensor fusion between traffic sign recognition, cruise control, and navigation system. In the US, the Department of Transportation wants to improve traffic statistics and safety with a new "Safe Systems" strategy. By the end of 2023, it plans to provide advice and 5 billion US dollars in funding to enable US states to introduce speed limits or launch pilot programs to increase the use of speed cameras.

Expected Development of the Business Situation

Planning assumptions for the Group and the divisions

The forecast for business growth in 2023 is based on the group planning set out in the fall of 2022.

Since the first quarter of 2022, Jenoptik operates in the following reportable segments: Advanced Photonic Solutions, Smart Mobility Solutions, and Non-Photonic Portfolio Companies.

The starting point is formed by the separate plans from the divisions and operational business units, which are harmonized and integrated in the group planning. Potential acquisitions, divestments, and exchange rate fluctuations are generally not taken into account in the planning process.

The system of key performance indicators covers the revenue, EBITDA margin, order intake, capital expenditure, and cash conversion rate indicators. Other indicators will also be regularly compiled in the future and are used by top management for informational purposes.

See the "Control System" chapter for more information on the key performance indicators

With our strategic Agenda 2025, "More Value", we are targeting lasting profitable growth in the core photonics markets of semiconductor & electronics, life science & medical technology, and smart mobility. We aim to push on with our plans to become a pure, globally leading photonics group.

See the "Business Model and Markets" and the "Targets and Strategy" chapters for more information on the strategy and the division structure

Overall, the Executive Board anticipates consistently good business performance, with an increase in revenue and earnings, in the Advanced Photonic Solutions division in 2023. We will enable this by stepping up our activities as an active global supplier of solutions and products based on photonic technologies, by focusing on key sales markets, by growing our global reach, and with innovative products and a larger range of integrated system solutions. The division should continue to benefit here from strong demand for optical and micro-optical system solutions for semiconductor production. In the Biophotonics area (medical technology and life science), existing cooperation arrangements with key international customers are to be further expanded and new customers acquired in the current fiscal year, thus generating further growth. Good performance is also expected for the area of Optical Test & Measurement, which will also be supported by applications in the field of virtual and augmented reality.

See the "Framework Conditions" chapter for more information on the future development of the Jenoptik sectors

In the current fiscal year, the Advanced Photonic Solutions division will invest in its operational performance and sales to help promote future growth. Key measures in this regard include the construction of a new clean room factory in Dresden and the expansion of our site in Berlin.

For the 2023 fiscal year, the Executive Board expects further growth in the Smart Mobility Solutions division. This is to be supported by new products, the expansion of own sales channels, and a promising project pipeline. By optimizing the product pipeline, also in the form of new business models such as software-as-a-service, and a broader range of products in the value chain, the aim is to increase the share of recurring revenue contributions in the division. On a regional level, Jenoptik is primarily expecting growth momentum benefiting the Smart Mobility Solutions division to come from North America and Australia.

In 2022, business growth in the Non-Photonic Portfolio Companies was still impacted by the effects of the Covid-19 pandemic, negative impacts due to projects in the automation area, but also by structural changes in the automotive industry. For 2023, the Executive Board expects to see good growth in the segment, particularly in the Automation & Integration business in North America.

2023 earnings position forecast

Based on the good order intake and backlog in the fiscal year 2022 and ongoing promising developments in the core photonics businesses, especially in the semiconductor equipment sector, the Executive Board is confident of further profitable growth in the fiscal year 2023.

In order to achieve the planned growth, we continue to assume that the political and economic conditions will not deteriorate. In particular, these include economic trends, the war in Ukraine, regulations at European level, the pandemic situation, and further macropolitical developments in our sales markets.

Possible portfolio changes were not considered in the forecast.

For 2023, Jenoptik is expecting revenue growth to between 1,050 million and 1,100 million euros (2022: 980.7 million euros).

At present, the Executive Board is expecting EBITDA (earnings before interest, taxes and depreciation/amortization, incl. impairment losses and reversals) to show strong year-on-year growth in the current fiscal year 2023 (2022: 184.1 million euros). The EBITDA margin is due to come in at between 19.0 and 19.5 percent (2022: 18.8 percent).

The order intake is in part affected by major orders, particularly in the Smart Mobility Solutions division. In the past fiscal year, the continuing operations received new orders worth 1,185.4 million euros and had thus built up a good order base at year-end 2022. 83.4 percent of the order backlog as of December 31, 2022 is expected to be converted to revenue in 2023. For the current fiscal year 2023, the Executive Board expects the order intake to be roughly at the very high level of the prior year.

The Advanced Photonic Solutions division is expecting revenue growth in the low double-digit percentage range for 2023. EBITDA is expected to grow in line with revenue.

The Smart Mobility Solutions division also expects growth in 2023, with a revenue increase in the high single-digit percentage range. EBITDA is expected to show a stronger rate of growth than revenue.

The Non-Photonic Portfolio Companies are expecting revenue to grow in the mid single-digit percentage range in 2023. EBITDA is expected to show a significantly stronger rate of growth than revenue partly due to the elimination of negative impacts from projects in the automation area.

Group asset and financial position forecast

Jenoptik expects that capital expenditure in the fiscal year 2023 will be significantly above the prior-year level of 106.0 million euros. Capital expenditure on property, plant, and equipment will focus on the growth areas within the divisions or take place within the scope of new customer projects. It aims to expand capacities, thereby ensuring future growth, e.g., through construction of the new cleanroom facility in Dresden.

The Executive Board expects growth in the cash conversion rate (ratio of free cash flow to EBITDA) to over 50 percent in 2023 (31/12/2022: 44.9 percent).

Important note. The actual results may differ significantly from the forecasts of anticipated development made above and summarized below. This may arise, in particular, if one of the uncertainties mentioned in this report were to materialize or worsen, or if the assumptions upon which the statements are based prove to be inaccurate in relation to the economic and macroeconomic development, market risks, and geopolitical risks, especially the Ukraine war and associated sanctions.

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T38 Summary of targets for Group and segments (in million euros)

	Actual 2022	Forecast for 2023 (without major portfolio changes)
Revenue	980.7	1,050 to 1,100 million euros
Advanced Photonic Solutions	729.6	Growth in the low double-digit percentage range
Smart Mobility Solutions	114.3	Growth in the high single-digit percentage range
Non-Photonic Portfolio Companies	132.3	Growth in the mid single-digit percentage range
EBITDA/EBITDA margin	184.1 / 18.8 %	Marked growth / 19.0 to 19.5 percent
Advanced Photonic Solutions	170.0	Growth in line with revenue
Smart Mobility Solutions	19.3	Growth stronger than revenue
Non-Photonic Portfolio Companies	2.7	Growth stronger than revenue
Order intake	1,185.4	Roughly at the very high level of the prior year
Cash conversion rate	44.9 %	> 50 percent
Capital expenditure[1]	106.0	Significantly above the prior-year level

[1] Without capital expenditure on financial investments

General Statement by the Executive Board on Future Development

In the current fiscal year 2023, the Jenoptik Group will push on with its strategic Agenda 2025, concentrating on three core photonics markets. In terms of economic development, our key focus remains on profitable growth. We believe that revenue growth, a positive product mix, economies of scale, and more efficient and faster processes will result in higher earnings. Thanks to the continuing good asset situation and a viable financing structure, the Executive Board believes that Jenoptik has sufficient room for maneuver to finance both investments in further organic growth and potential acquisitions.

Achieving our targets is dependent on the development of the economic and political environment, in particular in connection with the Ukraine war and associated sanctions.

On the basis of very good order intake growth in the fiscal year 2022, the current order backlog, and ongoing promising developments in the core photonics business, the Executive Board remains positive for the fiscal year 2023 and expects revenue growth to between 1,050 and 1,100 million euros in the current fiscal year. The EBITDA margin is due to come in at between 19.0 and 19.5 percent.

In 2023, we will again invest a significant portion of our funds in developing innovative products and expanding capacities. As part of our active portfolio management, potential acquisitions are closely scrutinized; divestments have not been ruled out.

Based on the information available at the time this report was created, the Executive Board expects the Jenoptik Group to see positive business development in 2023.

Jena, March 20, 2023
JENOPTIK AG

Dr. Stefan Traeger
President & CEO

Hans-Dieter Schumacher
Chief Financial Officer

Dr. Prisca Havranek-Kosicek
Member of the Executive Board

Dr. Ralf Kuschnereit
Member of the Executive Board

Information and Notes Relating to Takeover Law

Explanatory Report in accordance with § 176 (1) (1) of the German Stock Corporation Act (AktG) and Reporting on § 289 a and § 315 a of the German Commercial Code (HGB) in accordance with the German Takeover Directive Implementation Act

1. Composition of the share capital

As of the balance sheet date on December 31, 2022, the subscribed capital totaled 148,819 thousand euros (prior year: 148,819 thousand euros). It is divided into 57,238,115 no-par value registered shares (prior year 57,238,115). Each share is therefore worth 2.60 euros of the nominal capital.

The same rights and obligations apply to all the shares of the company. Each share represents one vote at the Annual General Meeting and is the determining factor for the shareholders' proportion of company profits (§ 58 (4), § 60 of the German Stock Corporation Act (AktG)). The shareholders' rights also include the subscription right to shares in the event of increases in capital (§ 186 of the German Stock Corporation Act). In addition, the shareholders are entitled to administrative rights, e.g. the right to participate in the Annual General Meeting and the authority to put forward questions and motions and to exercise their right to vote. The shareholders' additional rights and duties are defined in the German Stock Corporation Act, in particular in § 12, 53 a et seq., § 118 et seq., and § 186. Under § 4 (3) of the Articles of Association, any claim by a shareholder to the securitization of their shares is excluded.

2. Restrictions relating to voting rights or the transfer of shares

In accordance with § 136 (1) of the German Stock Corporation Act, legal restrictions affecting voting rights exist with respect to votes for annual approval regarding shares which are held directly or indirectly by members of the Executive and/or Supervisory Boards. Violations of reporting obligations as specified in § 33 (1) or (2) and § 38 (1) or § 39 (1) of the German Securities Trading Act may nullify voting rights, at least temporarily, in accordance with § 44 of this Act.

Pursuant to § 67 (2) of the German Stock Corporation Act, rights and obligations arising from shares shall exist in relation to JENOPTIK AG only for and against those persons entered in the share register. To be recorded in the share register, shareholders must provide JENOPTIK AG with the information required by law (name or company name, address, registered office if applicable, email address, date of birth and number of shares they hold). The extent to which the shares belong to the person who is recorded as the holder in the share register is also to be disclosed in accordance with the Articles of Association. Shareholders who do not comply with these disclosure obligations may not exercise their voting rights pursuant to § 67 (2) (2) and (3) of the German Stock Corporation Act.

In connection with Article 19 (11) of the EU Market Abuse Regulation (EU 596/2014) and due to internal Group requirements, certain restraints of trade shall apply to members of the Executive and Supervisory Boards and to certain employees in connection with the publication of quarterly statements and reports, preliminary figures as well as the Annual and Consolidated Financial Statements.

3. Direct or indirect participations in the capital exceeding 10 percent of the voting rights

Information on direct or indirect investments in capital which exceed 10 percent of the voting rights, can be found in the Notes of the Annual Financial Statements under point 3.

4. Holders of shares with special rights conferring controlling powers

There are no shares in JENOPTIK AG that entail special rights.

5. Form of controlling voting rights if employees own shares and do not directly exercise their control rights

There are no employee shareholdings and therefore no resultant control of voting rights.

6. Statutory regulations and provisions of the Articles of Association relating to the appointment and dismissal of Executive Board members and changes to the Articles of Association

The appointment and dismissal of Executive Board members is carried out exclusively in accordance with the statutory regulations of § 84 and § 85 of the Stock Corporation Act and § 31 of the Codetermination Act (MitbestG). In accordance with this, the Articles of Association stipulate in § 6 (2) that the appointment of members to the Executive Board, the revocation of their appointment and the conclusion, modification and termination of contracts for services with members of the Executive Board shall be carried out by the Supervisory Board. In accordance with § 31 (2) of the Codetermination Act, a majority of at least two thirds of the members of the Supervisory Board is required for the appointment of Executive Board members. Revocation of appointment as a member of the Executive Board is only possible for serious due cause (§ 84 (3) of the Stock Corporation Act).

§ 6 (1) (1) of the Articles of Association stipulates that the Executive Board of JENOPTIK AG must have at least two members. In the absence of a required Executive Board member, the court must appoint the member on the application of a stakeholder (§ 85 (1) (1) of the Stock Corporation Act) in urgent cases. The Supervisory Board can appoint a Chairman of or Spokesperson for the Executive Board (§ 84 (2) of the Stock Corporation Act, § 6 (2) (2) of the Articles of Association).

In accordance with § 119 (1) (5), § 179 (1) (1) of the Stock Corporation Act, changes to the content of the Articles of Association are passed by the Annual General Meeting. However, changes relating purely to the wording of the Articles of Association may be passed by the Supervisory Board in accordance with § 179 (1) (2) of the Stock Corporation Act in conjunction with § 13 (3) of the Articles of Association. This also includes the corresponding adaptation to the Articles of Association following the utilization of the Authorized Capital 2019 and of the Conditional Capital 2021. According to § 24 (1) of the Articles of Association, resolutions by the Annual General Meeting require a simple majority of the votes cast unless stipulated otherwise by law. In those cases in which the law requires a majority of the nominal capital represented for a resolution to be passed, a simple majority of the nominal capital represented is sufficient, unless specified otherwise by the law.

7. Authority of the Executive Board to issue and buy back shares

Detailed information on the authority of the Executive Board to issue shares, i.e. Authorized Capital 2019 and Conditional Capital 2021, as well as the authority of the Executive Board to buy back treasury shares, can be found in the Group Notes under the point "Equity".

8. Key agreements in the event of a change of control resulting from a takeover bid

Clauses in contracts concluded by JENOPTIK AG, which apply in the event of a change in control within the ownership structure of JENOPTIK AG following a change of control, exist for the financing agreements described below with a total utilized volume as of December 31, 2022 of 456,8 million euros (prior year: 549.6 million euros).

The conditions for accepting a change in control are formulated differently in each of the loan agreements. For the debenture bonds with a total utilized volume of 405.3 million euros (prior year: 456.8 million euros) a change in control gives the lenders the right to demand the repayment of the loan amount plus interest accumulated up to the repayment date within 30 banking days of receipt of the change of control notification. A change of control applies if one or more persons acting in concert, who are not attributable to the group of main shareholders existing on the date the contract is concluded, acquire more than 50 percent of the outstanding nominal capital or more than 50 percent of the voting rights, directly or indirectly at any time.

Under the revolving syndicated loan, every change in the current shareholder base of JENOPTIK AG, as a result of which at least 50 percent of the shares or voting rights are held by one or several persons acting in concert as described in § 2 (5) of the

Securities Acquisition and Takeover Act, results in the possibility that lenders (i) may refuse to participate in further disbursements and (ii) may terminate loan commitments, in full or in part, and call in payments made and sub-loan liabilities, in full or in part, including accrued interest. The syndicated loan has a total volume of 400 million euros, of which 51.5 million euros had been utilized as of December 31, 2022 (prior year: 92.9 million euros).

9. Compensation agreements by the company with Executive Board members or employees in the event of a change of control

No right to give notice of termination in the event of a change of control, i.e. the acquisition of at least 30 percent of voting rights by a third party, has been agreed with the members of the Executive Board. In such cases, they also have no claim to any severance payment. If the premature termination of an Executive Board role is agreed with an Executive Board member due to a change of control, the amount of a severance payment is limited to a maximum of two years' annual compensation in accordance with the respective recommendations of the German Corporate Governance Code, as amended on April 28, 2022. Under no circumstances, however, may the severance payment be greater than the compensation due for the remaining term of the service contract.

Corporate Governance Statement (with Corporate Governance Report)

In this statement, the Executive Board and Supervisory Board report on the corporate governance of the company in accordance with § 289 f, § 315 d of the German Commercial Code (HGB) and Principle 23 of the German Corporate Governance Code (the Code).

The JENOPTIK AG Executive Board and Supervisory Board affirm their commitment to responsible corporate governance and control, geared towards lasting value creation and encompassing all units within the Group. They see good corporate governance as the foundation for sustained corporate success and, at the same time, an important contribution to strengthening the trust in Jenoptik on the part of shareholders, business partners, employees, and the general public.

Corporate Governance

In December 2022, the Executive and Supervisory Boards jointly adopted the following Declaration of Conformity in accordance with § 161 of the German Stock Corporation Act (AktG), which is permanently available to shareholders on the company's website at https://www.jenoptik.com under the section Investors/Corporate Governance. If, in the future, changes arise at Jenoptik which have an impact on a declared compliance, the Declaration of Conformity will be updated during the year.

Declaration of Conformity by the Executive Board and Supervisory Board of JENOPTIK AG in the Fiscal Year 2022

According to § 161 (1) (1) of the German Stock Corporation Act, the Executive and Supervisory Boards of a listed company are required to issue a declaration once a year that the recommendations of the "Government Commission on the German Corporate Governance "("Code") as published by the Federal Ministry of Justice in the official section of the Federal Gazette [Bundesanzeiger] have been and are complied with, or to indicate which recommendations have not been or are not applied and why not.

The Executive Board and the Supervisory Board of JENOPTIK AG support the recommendations of the Code and state that as pursuant to § 161 (1) (1) of the German Stock Corporation Act:

I. Since the last Declaration of Conformity in December 2021, the recommendations of the Code in the version dated December 16, 2019 **were complied** with until the new version of the Code came into force on April 28, 2022 ("Code 2022"), with the following exception:

In accordance with recommendation C.4 of the Code a Supervisory Board member who is not a member of any Executive Board of a listed company shall not accept more than five Supervisory Board mandates at non-group listed companies or comparable functions, with an appointment as Chair of the Supervisory Board being counted twice.

Our Supervisory Board member, Ms. Doreen Nowotne, also chairs the Supervisory Board of Franz Haniel & Cie. GmbH (not listed on a stock exchange) as well as of Brenntag AG (listed company) and is Supervisory Board member of Lufthansa Technik AG (not listed on a stock exchange). If the mandate at Jenoptik, which from Jenoptik's point of view is an internal mandate, is included in the addition of the mandates according to C.4 Ms. Nowotne has a total of six Supervisory Board mandates. Therefore, a deviation has been declared purely as a precautionary measure. The Supervisory Board has ensured that Ms. Nowotne has sufficient time available to discharge her duties at JENOPTIK AG.

II. Since the Code 2022 came into force, all the recommendations contained here **have been complied** with, with the following exceptions:

In accordance with recommendation C.4 of the Code 2022 a Supervisory Board member who is not a member of any Executive Board of a listed company shall not accept more than five Supervisory Board mandates at non-group listed companies or comparable functions, with an appointment as Chair of the Supervisory Board being counted twice.

In accordance with the recommendation A.5 of the Code 2022, the main characteristics of the entire internal control system and risk management system should be described in the company's management report, and a statement should be made on the appropriateness and effectiveness of these systems. According to recommendation C.1 of the Code 2022, the implementation status of fulfilling the overall profile of required skills and expertise for the Supervisory Board shall *be disclosed in the form of a qualification matrix in the corporate governance statement.*

As the two aforementioned recommendations A.5. and C.1 did not yet exist at the time the last Annual Report was prepared, the required reporting contents were not yet fully included in the 2021 management report and not included in the 2021 corporate governance statement. However, both recommendations will be implemented in the future.

III. In future, JENOPTIK AG **will comply** with all recommendations of the Code 2022 with the following exception which has been declared purely as a precautionary measure:

In accordance with recommendation C.4 of the Code 2022 a Supervisory Board member who is not a member of any Executive Board of a listed company shall not accept more than five Supervisory Board mandates at non-group listed companies or comparable functions, with an appointment as Chair of the Supervisory Board being counted twice.

We refer to the explanatory statement in Section I of this Declaration of Conformity regarding the mandates held by our Supervisory Board member, Ms. Doreen Nowotne, at other companies. The Supervisory Board has ensured that Ms. Nowotne has sufficient time available to discharge her duties at JENOPTIK AG.

Ms. Nowotne has publicly announced that she will resign as Chairman of the Supervisory Board at Franz Haniel & Cie. GmbH in April 2023. **From this date Jenoptik will fully comply with the recommendation C.4 and thus with all recommendations of the Code.**

December 14, 2022 | JENOPTIK AG

On behalf of the Executive Board	On behalf of the Supervisory Board
Stefan Traeger	Matthias Wierlacher
Dr. Stefan Traeger	Matthias Wierlacher

Information on Methods of Corporate Governance

Code of conduct, opportunity and risk management, compliance

At Jenoptik, economic success and responsibility for our actions are inextricably linked. For us, respect, fairness and openness as well as compliance with statutory provisions and internal group regulations are essential factors for responsible conduct with all stakeholders. Jenoptik's most important principles of conduct have been summarized in a Code of Conduct which is equally binding on all employees, managers and the Executive Board of the Jenoptik Group. It sets out minimum standards and general rules for our actions within the company as well as towards external partners and the public. This enables us to ensure a high level of integrity as well as ethical and legal standards within the Jenoptik Group. In the event of questions regarding the Code of Conduct or suspected illegal or unlawful matters, all Jenoptik employees may speak in confidence to their respective manager or the contact persons named in the Code of Conduct. In addition, employees may report significant violations that must be handled confidentially via a digital whistleblowing system available to all employees in many languages via our internal platforms as well as on the Jenoptik website. It is operated independently by EQS Group AG. The data is stored on protected servers in Germany. The content of the reports, which can also be submitted by telephone or email, is processed exclusively by Jenoptik employees trained in the confidential complaints procedure.

The Code of Conduct can be found at www.jenoptik.com, under the section Investors / Corporate Governance / Code of Conduct

Requirements for our suppliers and sales partners are set out in the Jenoptik Group's Code of Conduct for Business Partners, which applies to all business partners worldwide. Jenoptik has also signed the Diversity Charter and is a member of the UN Global Compact.

For Jenoptik, good corporate governance also includes continuous and systematic management of opportunities and risks. The enterprise risk management (ERM) accounts for both risks and opportunities, and was implemented throughout the entire organization. The goal is to support the implementation of the group strategy and to define actions that create an optimum balance between growth and return targets on the one side and the associated risks on the other.

Detailed information on enterprise risk management can be found in the Risk and Opportunity Report

Compliance with national and internationally recognized compliance requirements is an essential element of our risk prevention and the processes of the Jenoptik compliance management system (CMS). The Jenoptik values, the Code of Conduct, and the group guidelines and process descriptions form the basis of the CMS. Compliance with them is a basic prerequisite for the trust of our business partners, shareholders and the public in Jenoptik's performance and integrity. The CMS is continuously developed and adapted in line with changing conditions.

With the group guidelines for key business processes, the Jenoptik Group has a globally uniform framework. Central departments, divisions, and regions can reinforce this set of rules with more detailed regulations in accordance with their respective requirements. The guidelines are regularly reviewed, and extended or updated as necessary. This system of processes and controls is intended to identify any possible deficits in the company at an early stage and to take appropriate actions to minimize or eliminate them. In the course of its audits, Internal Audit has not gained any knowledge that the internal control system is not appropriate and effective.

For further information on the internal control system see Risk and Opportunity Report

On the Executive Board, Dr. Stefan Traeger is responsible for the central Compliance & Risk Management department. Global compliance activities are coordinated by the center of excellence in Germany and supported by local colleagues in the North America and Asia/Pacific regions.

In order to familiarize employees with these topics and to improve employee awareness, regular online training courses and classroom events are held on subjects relevant to compliance, such as anti-corruption, anti-trust law, export control, IT security as well as data protection. The aim of this is to create company-wide uniform understanding of our compliance standards. Main training courses are offered for new employees as well as mandatory e-learning refresher courses for all employees. In addition, employees can contact the central Compliance & Risk Management department with any questions relating to compliance or risk issues at Jenoptik, as well as use a help desk on the intranet or an app on their smartphone.

Further information on compliance and supplier management can also be found in the chapter "Non-financial Report"

Sustainability

Jenoptik's understanding of sustainability is based on the conviction that the economic goals of the company and thus lasting profitable growth can only be achieved by behaving responsibly in line with the environment and society. The separate Combined Non-financial Report contains detailed information on Jenoptik's sustainability management in the areas of employee and environmental matters, human rights, anti-corruption and the supply chain, quality as well as social commitment of the Group.

Composition and Mode of Operations of the Executive Board, Supervisory Board and its Committees

JENOPTIK AG is a stock corporation under German law with a dual management system, comprising the Executive Board and Supervisory Board. Their tasks and powers as well as structure and working methods are essentially determined by the German Stock Corporation Act, the Articles of Association of JENOPTIK AG and the Rules of Procedure. The Executive Board runs the company on its own responsibility and in the interests of the company with the aim of sustainably increasing the company's value. It takes into account the concerns of all stakeholders, in particular shareholders and the Group's employees. The Supervisory Board advises and monitors the Executive Board in its management of the company and is involved in decisions of fundamental importance to the company.

Executive Board

The members of the JENOPTIK AG Executive Board are appointed by the Supervisory Board. In accordance with the Articles of Association, the Executive Board shall comprise at least two persons. They share common responsibility for the overall management of the Group and decide on primary matters of company policy, the corporate strategy in which environmental and social objectives are given appropriate consideration alongside long-term economic goals, as well as planning with financial and sustainability-related targets. In the fiscal year 2022, the Board had two members. With effect from January 1, 2023, the Executive Board shall be expanded to three persons (for more details, see section "1. Diversity Concept for the Executive Board"). The Executive Board has not set up any committees. It is supported in the management of the company by the Executive Management Committee (EMC), which, as of December 31, 2022, comprised the members of the Executive Board, head of Personnel, the head of Corporate Controlling & Accounting, the heads of the North America and Asia / Pacific regions as well as the heads of the two divisions Advanced

Photonic Solutions and Smart Mobility Solutions. At monthly meetings, this committee provides the Executive Board with information on all relevant incidents for the company and the economic situation of the divisions.

The Executive Board is also responsible for ensuring compliance with statutory provisions and internal regulations. It is responsible for the preparation of interim reports and announcements, consolidated and annual financial statements, and for setting up the control and risk management system geared to the company's risk situation and the compliance management system. The Executive Board ensures that the risks and opportunities for the company associated with social and environmental factors, as well as the environmental and social impact of the company's activities are systematically identified and assessed. The specific allocation of responsibilities and tasks within the Executive Board (including the responsibility for sustainability topics (environment, social, governance)) is regulated in an organizational chart as an appendix to the Executive Board's Rules of Procedure. 2

The members of the Executive Board work closely together in a collegial manner and continually inform one another of important measures and events within their assigned areas. Executive Board meetings take place at least once a month. The Supervisory Board has issued Rules of Procedure for the Executive Board. These define which significant business transactions require the approval of the Executive Board as a whole or the Supervisory Board. In addition, the internal workings of the Executive Board and the methods of reporting to and coordinating with the Supervisory Board are regulated in greater detail.

The Chairman of the Executive Board coordinates the cooperation of the Executive Board with the Supervisory Board. Members of the Executive Board are required to disclose conflicts of interest to the Supervisory Board without delay and to inform the other members of the Executive Board of this.

Supervisory Board

With equal representation in accordance with the German Codetermination Act, the Supervisory Board of JENOPTIK AG consists of twelve members, six of whom are elected by the shareholders at the Annual General Meeting and six of whom are nominated by employees in accordance with the Codetermination Act. The Supervisory Board is composed in such a way that, as a whole, it is endowed with the knowledge, abilities, and professional experience necessary to carry out its tasks in an orderly manner. Each member shall ensure that they have sufficient time available to perform their duties. Six of its twelve members, three shareholder and three employee representatives, are female, currently exceeding the requirements of § 96 (2) (1) of the German Stock Corporation Act. The shareholder representatives were elected individually at the 2022 Annual General Meeting, three of them for a term of office until the end of the 2024 Annual General Meeting and three until the end of the 2025 Annual General Meeting. The concept of diversity pursued with respect to the composition of the Supervisory Board is described in section "2. Diversity Concept for the Supervisory Board" of this statement. 1

The Chairman of the Supervisory Board is elected by the members of the Supervisory Board. In the past fiscal year, Mr. Matthias Wierlacher was re-elected Chairman of the Supervisory Board following his election by the Annual General Meeting on June 15, 2022. He coordinates the work of the Supervisory Board, presides over its meetings and represents the body externally. The Chairman maintains regular contact with the Executive Board, which provides the Supervisory Board chairman with immediate information on important events which are of crucial importance to the position and development of the company. In the event of a tied vote by the Supervisory Board, a second round of voting is conducted in which the board chairman casts two votes, insofar as this is permitted by law. The Chairman of the Supervisory Board also chairs the Personnel, Mediation, Investment and Nomination Committees, but not the Audit Committee.

The Supervisory Board meets at least four times a year, but as a rule meets five times a year because of the Supervisory Board's strategy meeting which takes place in the fall. Taking into account the results of the audit and the recommendations of the Audit Committee, the Supervisory Board examines and approves the Financial Statements and Consolidated Financial Statements, the Combined Non-financial Report and the Combined Management Report for JENOPTIK AG and the Group and adopts the Annual Financial Statements. Ernst & Young GmbH, Wirtschaftsprüfungsgesellschaft, Stuttgart, was appointed to audit the Annual and Consolidated Financial Statements for the fiscal year 2022. The Supervisory Board also decides on the Executive Board's proposal for the appropriation of accumulated profits, which is then submitted to the Annual General Meeting for resolution. It decides and regularly reviews the system for the remuneration of Executive Board members. Together with the Executive Board, the Supervisory Board is also responsible for preparing the Remuneration Report. It also deals with sustainability issues.

The Supervisory Board carries out a review of the efficiency of its activities at regular intervals. The Supervisory Board has decided to have the review externally evaluated every three years. In the intervening period, it will be discussed and

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Further details on the composition of the Supervisory Board and its committees can be found in § 11 of the Articles of Association of JENOPTIK AG, in the Report of the Supervisory Board, and in the Annual Financial Statements 2022 of JENOPTIK AG

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Further information on the members of the Executive Board as well as details on the allocation of responsibilities can be found in the Annual Financial Statements 2022 of JENOPTIK AG as well as on the Internet at www.jenoptik.com in the section About Jenoptik / Management / Executive Board

Further information about the function and structure of the Executive Board can be found in the Executive Board's Rules of Procedure at www.jenoptik.com in the section About Jenoptik / Management / Executive Board reviewed internally on an annual basis. The last external review took place in 2020 and presented a positive picture – also reflected in benchmarking – of the work of the Supervisory Board and its committees. Based on suggestions from the 2021 internal evaluation, the Investment Committee reviewed its task profile and working methods, among other things in 2022. An internal self-assessment of the Supervisory Board, largely reconstituted since the Annual General Meeting, was also carried out again in the fiscal year 2022. This review also revealed no fundamental need for change, and the results confirmed the professional cooperation within the Supervisory Board.

All Supervisory Board members are to disclose any conflicts of interest to the Supervisory Board without delay. In the fiscal year 2022, there were no conflicts of interest requiring disclosure among members of the Supervisory Board.

The Rules of Procedure for the Supervisory Board govern key aspects of cooperation within the board and with the Executive Board. The rules also mandate the creation of committees as a means of improving efficiency when it comes to Supervisory Board work on complex topics.

The Rules of Procedure of the Supervisory Board can be found at www.jenoptik.com under the heading "About Jenoptik"

The Supervisory Board currently has five committees that, with the exception of the Nomination Committee, which is composed only of shareholder representatives, are made up of equal numbers of shareholder and employee representatives. The candidates' professional and personal expertise is taken into account in the formation of committees.

The committees prepare decisions for the Supervisory Board and may, in individual cases, make decisions in place of the Supervisory Board insofar as this is permitted by law. The respective committee chairmen report to the Board on the content discussed and the resolutions and recommendations approved no later than at the next Supervisory Board meeting.

The Audit Committee meets at least four times each year. Its key tasks are monitoring accounting and the accounting process, and dealing with auditing of the financial statements and the effectiveness, appropriateness and ongoing development of the compliance, risk management, and internal control systems. After obtaining a declaration of independence from the auditor, it prepares the Supervisory Board's recommendation to the Annual General Meeting for appointment of the auditor, grants the audit assignment, and sets out the main points for the audit. It consults with the auditor on the assessment of the audit risk, audit strategy and planning, and regularly assesses the quality of the audit. On the basis of the auditor's reports, and following its own review, the Audit Committee submits proposals to the Supervisory Board for the adoption of the Annual Financial Statements of JENOPTIK AG and for the approval of the Consolidated Financial Statements. The Chairman of the Audit Committee also discusses the progress of the audit with the auditor and reports to the Committee on this. The Audit Committee also consults regularly with the auditor without the Executive Board being present. The duties of the Audit Committee also include preparing the Supervisory Board's decision on the Combined Non-financial Report. Jenoptik's Internal Auditing reports regularly to the Audit Committee.

T39 Committee memberships of the Supervisory Board members

Member of Personnel Committee	Member of Mediation Committee	Member of Nomination Committee
Matthias Wierlacher, Chairman	Matthias Wierlacher, Chairman	Matthias Wierlacher, Chairman
Stefan Schaumburg, Deputy Chairman	Evert Dudok	Evert Dudok
Evert Dudok	Alexander Münkwitz (since 15/06/2022)	Elke Eckstein (since 15/06/2022)
Elke Eckstein (since 15/06/2022	Stefan Schaumburg	Heinrich Reimitz (until 15/06/2022)
Dörthe Knips (since 15/06/2022)	Dieter Kröhn (until 31/03/2022)	
Franziska Wolf (since 15/06/2022)		
Thomas Klippstein (until 15/06/2022)		
Heinrich Reimitz (until 15/06/2022)		
Frank-Dirk Steininger (until 15/06/2022)		

Both Mr. Thomas Spitzenpfeil as Chairman of the Audit Committee and Ms. Doreen Nowotne as his deputy have expertise in both accounting and auditing as defined by § 100 (5) of the German Stock Corporation Act. It is the opinion of the Supervisory Board that both are independent members (for detailed information, please refer to "2. Diversity Concept for the Supervisory Board"). They are not former members of the Executive Board of JENOPTIK AG. Mr. Spitzenpfeil's expertise in accounting consists of the application of accounting principles, internal control, and risk management systems due to his professional background and his current position as CFO of the Schenck Process Group. His expertise in auditing consists of specialist knowledge and many years of experience in supporting the audits at various corporations, some of which are listed on the stock exchange, in positions of responsibility.

Ms. Nowotne has expertise in the field of accounting due to both her education and her professional background at an audit firm. In addition, due to her extensive expertise as the chair of the Supervisory Board at a number of corporations, and as a long-standing member of the Audit Committee at Jenoptik, she has comprehensive knowledge of auditing financial statements and, in this context, additional expertise in sustainability reporting and the associated auditing. Jenoptik has been publishing a Non-financial Report for five years now, and throughout this period Ms. Nowotne has been involved in the compilation and partial audit of this report with so-called limited assurance.

The Personnel Committee convenes at least once a year. It deals with the long-term succession planning for the members of the Executive Board and prepares their appointment by the Supervisory Board. The Personnel Committee regularly reviews the remuneration system for the Executive Board members, which is then approved by the Supervisory Board and submitted to the Annual General Meeting for approval in accordance with the statutory provisions. The Personnel Committee also prepares the conclusion and settlement of the target agreements for the short-term and long-term variable remuneration for the Executive Board members. If necessary, it may be supported by external, independent consultants.

The Nomination Committee proposes to the Supervisory Board suitable candidates for election to the Supervisory Board at the Annual General Meeting and meets only when required. Its proposals are developed taking into account the requirements and skills profile for the Supervisory Board as well as the Diversity Statement. In doing so, the Committee also takes into account whether overall compliance with the gender ratio has been objected to in accordance with § 111 (5), 96 (2) of the German Stock Corporation Act (AktG) (for detailed information, please refer to "2. Diversity Concept for the Supervisory Board").

The Investment Committee advises the Executive Board and supports the Supervisory Board on investment and divestment decisions requiring approval in accordance with the Executive Board's Rules of Procedure, in particular with the preparation and operational implementation of resolutions on the acquisition or sale of equity interests in companies or parts of companies.

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Further details of the work of Ms. Nowotne and Mr. Spitzenpfeil in these areas can be found in the CVs of both members on the Jenoptik website

Member of Audit Committee

Thomas Spitzenpfeil, Chairman (since 15/06/2022)
Doreen Nowotne, Deputy Chairman
Dörthe Knips (since 15/06/2022)
Alexander Münkwitz (since 15.06.2022)
Heinrich Reimitz, Chairman (until 15/06/2022)
Astrid Biesterfeldt (until 15/06/2022)
Thomas Klippstein (until 15/06/2022)

Member of Investment Committee

Matthias Wierlacher, Chairman
Stefan Schaumburg, Deputy Chairman
Elke Eckstein
André Hillner (since 15/06/2022)
Doreen Nowotne
Christina Süßenbach (since 15/06/2022)
Dörthe Knips (until 15/06/2022)
Dieter Kröhn (until 31/03/2022)
Alexander Münkwitz (01/04/2022 until 15/06/2022)

The Mediation Committee, which deals with matters relating to § 31 (3) (1) of the Codetermination Act, only meets when necessary.

Further details on the activities of the Supervisory Board and its committees in the fiscal year 2022 (as well as individual attendance at meetings) can be found in the Supervisory Board Report in this Annual Report. The allocation of responsibilities of the individual committees can be found in the Rules of Procedure of the Supervisory Board published on our website.

Remuneration of the Executive Board and Supervisory Board

The remuneration for the members of the Executive and Supervisory Boards is described in this Annual Report. The last vote on the adjusted remuneration system for the members of the Executive Board was made by the Annual General Meeting on June 9, 2021, which approved the remuneration system for the Executive Board with 75.96 percent. The resolution on the remuneration system for the members of the Supervisory Board at the 2022 Annual General Meeting was approved by 99.77 percent.

The Remuneration Report of the Executive Board and Supervisory Board for the last fiscal year, the auditor's report on this Remuneration Report and the applicable remuneration system in accordance with § 87a (1) and (2) (1) of the German Stock Corporation Act (AktG) and the last remuneration resolution as per § 113 (3) AktG are also available on the Internet at www.jenoptik.com under the categories Investors / Corporate Governance or Annual General Meeting. The Remuneration Report, including the auditor's opinion, is also included in the chapter of the same name in this Annual Report.

Specifications for Promoting the Participation of Women in Management Positions / Targets for the Proportion of Women

In accordance with § 111 (5) and § 96 (2) of the German Stock Corporation Act, the Supervisory Board of JENOPTIK AG must be comprised of at least 30 percent women and 30 percent men. With Elke Eckstein, Prof. Dr. Ursula Keller and Doreen Nowotne on the shareholder side and Dörthe Knips, Christina Süßenbach and Franziska Wolf on the employee side, a total of six women are currently represented on the Supervisory Board. This equates to 50 percent, so Jenoptik currently significantly exceeds the legally required gender quota on the Supervisory Board.

In accordance with § 111 (5) of the German Stock Corporation Act, the Supervisory Board of Jenoptik is also required to determine targets for the proportion of women on the Executive Board. As Jenoptik's Executive Board comprised just two persons until December 31, 2022, the target ratio of zero percent set by the Supervisory Board on June 8, 2020 shall continue to apply until June 30, 2023. The requirements of the German Stock Corporation Act, as amended by the Second Management Positions Act, shall not apply until the Executive Board consists of at least four persons. The actual ratio achieved as of December 31, 2022 is zero percent. In the case of the two-member board, the determination of a higher quota would have had the mandatory consequence that, in the event of a vacancy, a woman would always have to be appointed. The Supervisory Board would, however, want to be able to make appointments giving due consideration to the professional expertise and personal integrity of who is, in its opinion, the most suitable candidate, irrespective of their gender.

With effect from March 1, 2023, the Jenoptik Executive Board will include a woman – Dr. Prisca Havranek-Kosicek. Due to the expansion of the Executive Board to three persons, the Supervisory Board shall also set a new target for the proportion of women on the Executive Board in the first half of 2023.

In accordance with § 76 (4) of the German Stock Corporation Act, the Executive Board of JENOPTIK AG resolved at its meeting on June 24, 2022 a new target figure of 25 percent for the proportion of women for the first management level below the Executive Board. This target figure is to be achieved by June 30, 2027. The first management level below the Executive Board of JENOPTIK AG includes all Executive Vice Presidents, Vice Presidents, and Directors employed at JENOPTIK AG. As of December 31, 2022, the proportion of women in the first management level below the Executive Board equated to 10.5 percent due to a change of one female manager (prior year: 16.7 percent). However, the Executive Board has taken various measures to increase the proportion of women again in the medium to long term. A target for the second management level has not been set because JENOPTIK AG as a Corporate Center has flat management structures and therefore has no continuous second management level.

At the end of 2022, women made up 54.4 percent of all employees at JENOPTIK AG. Jenoptik has also voluntarily set itself a further target figure, the so-called diversity rate, which is calculated from the average percentage of managers with an international background as well as female managers throughout the Group. The diversity rate was 30.6 percent as of December 31, 2022 and is expected to increase to 33 percent by 2025. To further accelerate this change in corporate culture, numerous measures have been implemented in the Jenoptik Group. For example, there are internal and external recruitment campaigns, women's networks, and regular (online) events for the mutual exchange of ideas. Regular regional "Jenoptik Diversity Councils" have also been established as internal contacts for questions on diversity within the company.

Description, Goals, and Implementation of Diversity Policy with Results Achieved

1. Diversity policy for the Executive Board including the results achieved in the fiscal year 2022

The diversity policy for the Executive Board facilitates a long-term and orderly selection process for the appointment of new Executive Board members. The aim is to fill the Executive Board in such a way that it has the knowledge, skills, and professional experience which, when taking into account the statutory framework, are necessary for the proper performance of the Executive Board's duties, and essential for the activities of the Jenoptik Group.

The Supervisory Board makes decisions for the long-term succession planning of the Executive Board and is supported in this by the Personnel Committee. Both the Personnel Committee and the Supervisory Board itself regularly discuss the contract terms and renewal options for current Executive Board members and, where relevant, also discuss possible successors. The Supervisory Board and the Personnel Committee base their deliberations on the requirements and skills profile for the Executive Board and continuously develop this further. This is an integral element of the diversity concept and defines various criteria which must be fulfilled, such as education, professional background, and the personality requirements of the candidate. When necessary, the Personnel Committee and the Supervisory Board are supported by independent, external experts as required.

In the past fiscal year, the Supervisory Board, with the support of the Personnel Committee, revised and updated the requirements profile as part of the expansion of the Executive Board to three people from January 1, 2023 and the search for a successor to Hans-Dieter Schumacher, who will leave the company on March 31, 2023. When appointing people to the Executive Board, appropriate consideration is to be given to the international nature of the company and its dealings with other cultures. The diversity concept also takes into account the specifications of the Supervisory Board's Rules of Procedure with regard to the appointment of Executive Board members. For instance, the maximum age limit for the appointment of Executive Board members is 65 years at the time of the appointment. The initial appointment of Executive Board members shall be for a maximum of three years in accordance with the Code, unless the Supervisory Board agrees on a longer initial appointment period due to special circumstances in individual cases. The weighting of the individual criteria is based on the respective Executive Board seat to be filled and the associated areas of responsibility. The aim is to ensure that the Executive Board members as a whole complement each other as well as possible in terms of their skills, abilities, and experience.

The composition of the Executive Board as of December 31, 2022 fully complies with the requirements and skills profile. With the appointment of Dr. Ralf Kuschnereit as a member of the Executive Board as of January 1, 2023, and the associated expansion of the Executive Board to three persons, the photonic and operational expertise on the Executive Board has been further strengthened. Together with Dr. Prisca Havranek-Kosicek, who is appointed to the Executive Board as of March 1, 2023, and who will take over the post of Chief Financial Officer following the departure of Hans-Dieter Schumacher, a wide spectrum of knowledge and experience as well as educational and professional backgrounds is now covered in the Executive Board as a whole due to the different personalities, educational backgrounds, professional careers and diverse international experience provided by each member of the Executive Board. The members of the Board also represent different age groups.

2. Diversity concept for the Supervisory Board

The diversity concept for the Supervisory Board is intended to ensure that the Supervisory Board is filled in such a way that, as a whole, the board has the necessary knowledge, skills, and professional experience to perform its duties. This ensures professional and qualified control by the Supervisory Board, which complies with the applicable requirements of the German Stock Corporation Act, the German Corporate Governance Code, the Articles of Association, and the Rules of Procedure of the Supervisory Board of JENOPTIK AG.

The diversity policy is implemented in the election of shareholder representatives. When searching for candidates for seats on the Jenoptik Supervisory Board, the Nomination Committee

Further information on measures implemented to increase diversity within the Jenoptik Group can be found in chapter "Employee matters" of the Combined Non-financial Report

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More information on the CVs of the members of the Executive Board can be found on our website at www.jenoptik.com/about-jenoptik/management

of the Supervisory Board ensures that the objectives for the composition of the Supervisory Board (“Diversity Statement”), the requirements of the German Stock Corporation Act and the German Corporate Governance Code, and the requirements and skills profile are taken into account. In doing so, it also takes into account the existing skills and abilities of the elected employee representatives and subsequently submits suitable candidate proposals for the election of Supervisory Board members representing the shareholders to the Annual General Meeting. When selecting the respective candidates, the Supervisory Board ensures that they are able to devote the necessary time to performing their duties.

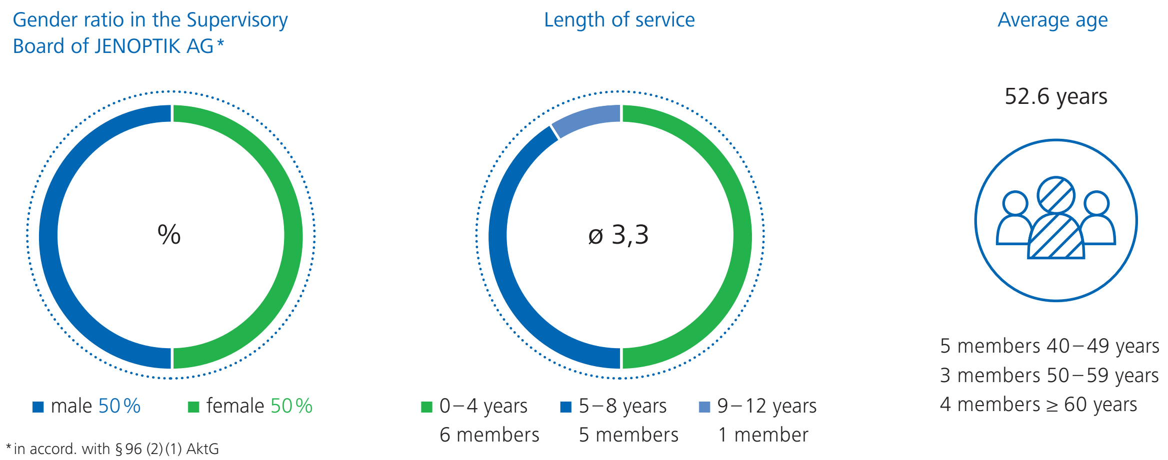
At the end of 2021, with the support of an external consultant, the requirements profile drawn up by the Supervisory Board detailing the necessary abilities and skills required for the Supervisory Board was updated and further developed with a view to the election of new Supervisory Board members representing the shareholders by the Annual General Meeting. The requirements profile specifies various criteria with regard to diversity, functional and structural expertise as well as strategic and company-related skills. The criteria relate to the requirements of the Supervisory Board mandate at Jenoptik as a global photonics group in a challenging competitive environment. With the help of this requirements profile, suitable candidates could be proposed for election by the Annual General Meeting on June 15, 2022.

It is the opinion of the Supervisory Board that, in its current composition, the required abilities, experience and skills are fulfilled in their entirety. The twelve members of the Supervisory Board contribute a wide range of specific knowledge and expertise to the work of the Supervisory Board.

The following graphics G17 and table T40 on pages 102 and 104 show the qualification matrix of the Supervisory Board of JENOPTIK AG. This is based on the revised skills profile of the Supervisory Board and the new composition of the Supervisory Board since the Annual General Meeting on June 15, 2022. The diversity of the professional and educational backgrounds of the individual members of the Supervisory Board can also be seen in the CVs published on our website and updated annually in February in the section About Jenoptik / Management / Supervisory Board.

In accordance with its Diversity Statement, the Supervisory Board currently includes at least three members with extensive international experience. Furthermore, the Supervisory Board should include at least four women. With three women on the shareholder side and three women on the employee side, the proportion of at least 30 percent required by the German Stock Corporation Act is exceeded with a current figure of 50 percent.

G17 Composition of the Supervisory Board



Last updated: 31/12/2022

With regard to the length of service, the Supervisory Board has decided not to establish a regular limit applicable to all members because there is no compelling link between the length of service and the independence of the member concerned. It is the view of the Supervisory Board that an across-the-board regular limit does not take into account individual factors that may justify a longer length of service for individual Supervisory Board members with continued independence. The Supervisory Board can benefit significantly from individual members with a long length of service, in particular from their experience and in-depth knowledge of the company, which promotes the quality of the work of the entire board. The average length of service for members of the Jenoptik Supervisory Board is currently only 3.3 years.

No member of the Supervisory Board shall take either an advisory or an executive role with customers, suppliers, creditors or other business partners of JENOPTIK AG, which shall lead to a significant and not merely temporary conflict of interest. The Supervisory Board is of the opinion that Mr. Dudok's post as Executive Vice President of Connected Intelligence at Airbus Defense & Space is not detrimental to his independence, especially as in June 2022 the sale of Jenoptik's VINCORION division was concluded. The Advanced Photonic Solutions division also has business relationships with the Airbus Group. However, none of these transactions between the division and Airbus concerned the operations for which Mr. Dudok is responsible at Airbus. The revenue of the Advanced Photonic Solutions division with companies of the Airbus Group amounted to 2.9 million euros in 2022 and thus less than 0.3 percent of Jenoptik Group revenue. They are therefore not material for the Jenoptik Group.

As a whole, the members are familiar with the photonics sector in which Jenoptik operates.

In accordance with the specifications of the Rules of Procedure, all members were under 70 years old, not only at the time of their respective election, but also at the beginning of 2022. Four members are older than 60, three members are between 50 and 59 years old and five members are between 40 and 49 years of age, which means that different age groups are adequately represented on the Supervisory Board.

It is the view of the Supervisory Board that all shareholder representatives are independent. They are Matthias Wierlacher, Elke Eckstein, Prof. Dr. Ursula Keller, Doreen Nowotne, Evert Dudok, and Thomas Spitzenpfeil.

Further information on the Executive Board and Supervisory Board, in particular on their working methods, including work in the committees, participation in meetings, and other mandates held by members, can be found in the Supervisory Board Report and in the Notes of the Annual Financial Statements of JENOPTIK AG.

The CVs of the Supervisory Board members including the mandates they hold can be found at www.jenoptik.com/about-jenoptik/management

Further Information on Corporate Governance

Annual General Meeting

JENOPTIK AG shareholders exercise their rights at the Annual General Meeting which takes place at least once a year. Each share is accorded one vote – there are no special voting rights. The shares of JENOPTIK AG are registered shares and the holders of the shares are entered in the share register of JENOPTIK AG. Only shareholders entered in the share register have the right to vote at the Annual General Meeting. They may either participate directly in the Annual General Meeting, or exercise their voting rights via a company-nominated proxy who is bound by the shareholder's instructions, via postal voting, or by authorizing a person of their choice. The shareholders are adequately supported by the company in this process. The use of electronic means of communication, in particular the Internet and the shareholder portal, makes it easier for shareholders to participate in the Annual General Meeting. The documents and information required by law for the Annual General Meeting are available on our website www.jenoptik.com in the section Investors / Annual General Meeting. The speech by the Executive Board and, after the Annual General Meeting, the attendance and voting results are also published there.

Due to the coronavirus pandemic, the Executive Board, with the approval of the Supervisory Board, decided to also hold the Annual General Meeting in the fiscal year 2022 as a virtual AGM, i.e. without the physical presence of shareholders or their proxies. Consequently, the shareholders were given the opportunity to cast their votes, in particular by means of electronic communication, e.g. via the Internet-based shareholder portal available on the Jenoptik website, and to watch the Annual General Meeting there. The shareholders were able to submit questions up to one day before the start of the Annual General Meeting and to send comments and video messages. The speech by the Executive Board was published in advance on the website and broadcast live on the Internet.

T40 Qualification matrix

	Matthias Wierlacher	Evert Dudok	Elke Eckstein	André Hillner *	Prof. Ursula Keller
Length of service / initial appointment	2012	2015	2017	2022	2022
Year of birth	1963	1959	1964	1979	1959
Gender	Male	Male	Female	Male	Female
Nationality	Austrian	Dutch	German	German	Swiss
Governance-specific skills					
Independence [1]	✓	✓	✓	n. a.	✓
Availability, number of positions held [2]	✓	✓	✓	✓	✓
Corporate governance experience	✓				
(Supervisory or Executive Board) experience in listed companies	✓		✓		
CEO experience (in non-listed companies)	✓	✓	✓		
CFO experience (in non-listed companies)	✓				
Financial and business skills	✓				
Functional / structural skills					
Personnel expertise, codetermination and social matters	✓	✓	✓	✓	
Sales and marketing expertise		✓	✓		
Operational expertise		✓	✓	✓	
Strategic and company-related skills in the following areas					
Digitization, innovation, IT		✓	✓		✓
Technology		✓	✓	✓	✓
Strategy and growth / M+A / portfolio management	✓		✓		
Markets and internationality		✓	✓		✓
Entrepreneurship / management	✓	✓	✓		✓
Capital markets	✓				
Specific industry / sector experience			✓	✓	
ESG expertise			✓		

[1] According to the Supervisory Board's self-assessment for the shareholder representatives
[2] The criterion for number of positions is not considered to be met if there is a deviation from the recommendation pursuant to section C.4 of the Code
✓ = Criterion is deemed to be met on the basis of a self-assessment by the Supervisory Board if there is good knowledge or experience in the dimension concerned. These can be acquired through existing qualifications or as part of the work as a member of the Supervisory Board (for example, many years of service on the Audit Committee)
* Employee representative

Dörthe Knips *	Alexander Münkwitz*	Doreen Nowotne	Stefan Schaumburg *	Thomas Spitzenpfeil	Christina Süßenbach *	Franziska Wolf *
2017	2022	2015	2017	2022	2022	2022
1974	1978	1972	1961	1962	1980	1982
Female	Male	Female	Male	Male	Female	Female
German	German	German	German	German	German	German
n. a.	n. a.	✓	n. a.	✓	n. a.	n. a.
✓	✓		✓	✓	✓	✓
		✓	✓	✓		
		✓	✓	✓		
				✓		
		✓		✓	✓	
✓	✓		✓		✓	✓
✓					✓	
	✓			✓		
		✓		✓		
		✓		✓		
		✓		✓		
				✓	✓	
		✓				

Transparent information

As part of our investor relations work, we report comprehensively on the position and development of the company. We use the Internet in particular for this purpose and information is made available at www.jenoptik.com in the Investors section.

For further information on investor relations activities, please refer to the chapter "The Jenoptik share"

Jenoptik immediately publishes major changes to its shareholder structure when it is informed that reportable voting rights tresholds have been reached, fallen below or exceeded. All publications are available on the JENOPTIK AG website under www.jenoptik.com in the category Investors/Share/Voting rights announcements. Further information can also be found in the separate Financial Statements of JENOPTIK AG.

Directors' dealings

Reportable securities transactions by members of the Executive Board or Supervisory Board pursuant to Article 19 of the EU Market Abuse Regulation are published at www.jenoptik.com under Investors/Corporate Governance/Directors' Dealings. In the fiscal year 2022, we received two notifications from Dr. Stefan Traeger.

Accounting and auditing

Jenoptik prepares the Consolidated Financial Statements as well as Consolidated Interim Reports in accordance with the International Financial Reporting Standards (IFRS) and the additional requirements of commercial law according to § 315e (1) of the German Commercial Code (HGB), as they are to be used in the European Union. JENOPTIK AG's Financial Statements, which are decisive for the dividend payment, are compiled in accordance with the requirements of the German Commercial Code and the German Stock Corporation Act. The Consolidated Financial Statements and the Annual Financial Statements, including the Combined Management Report, are examined by the auditor. On June 15, 2022, the Annual General Meeting selected Ernst & Young GmbH Wirtschaftsprüfungsgesellschaft, Stuttgart ("EY") as the auditor for the fiscal year 2022 on the recommendation of the Supervisory Board. EY was initially appointed in the fiscal year 2016 following an external tender. The position of responsible auditor for the auditing of the Consolidated Financial Statements and the Annual Financial Statements as well as the Combined Management Report was taken on for the fourth time by Steffen Maurer. The auditor's report was signed by Steffen Maurer and Alexander Murrmann in 2022. In 2021, it was signed by Steffen Maurer and Uwe Pester, in 2019 and 2020 by Michael Blesch and Steffen Maurer, and from 2016 to 2018 by Michael Blesch and Uwe Pester. The statutory provisions regarding the rotation obligations have been fulfilled. The Remuneration Report was also formally audited by EY. The audit of the Combined Non-financial Report was undertaken with so-called "limited assurance" by Price-WaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft.

The Supervisory Board has agreed with the auditor that they shall inform the Supervisory Board Chairman of all important events and findings that emerge during the audit. This includes occasions when inaccuracies are established during the audit in the Declaration of Conformity submitted by the Executive Board and Supervisory Board in accordance with § 161 of the German Stock Corporation Act.

Prior to submitting the election proposal to the Annual General Meeting, EY confirmed to the Supervisory Board in a declaration of independence that there were no business, financial, personal or other links between EY, its board members and audit managers on the one side and the company and its board members on the other, that could give rise to doubts about the independence of the auditor. EY also reported in its declaration on the degree to which non-audit services have been provided for Jenoptik over the past fiscal year or which have been contractually agreed for the current year. In the summer of 2022, the Audit Committee reviewed EY's non-audit services provided in the past year and updated the catalog of approved, predefined non-audit services.